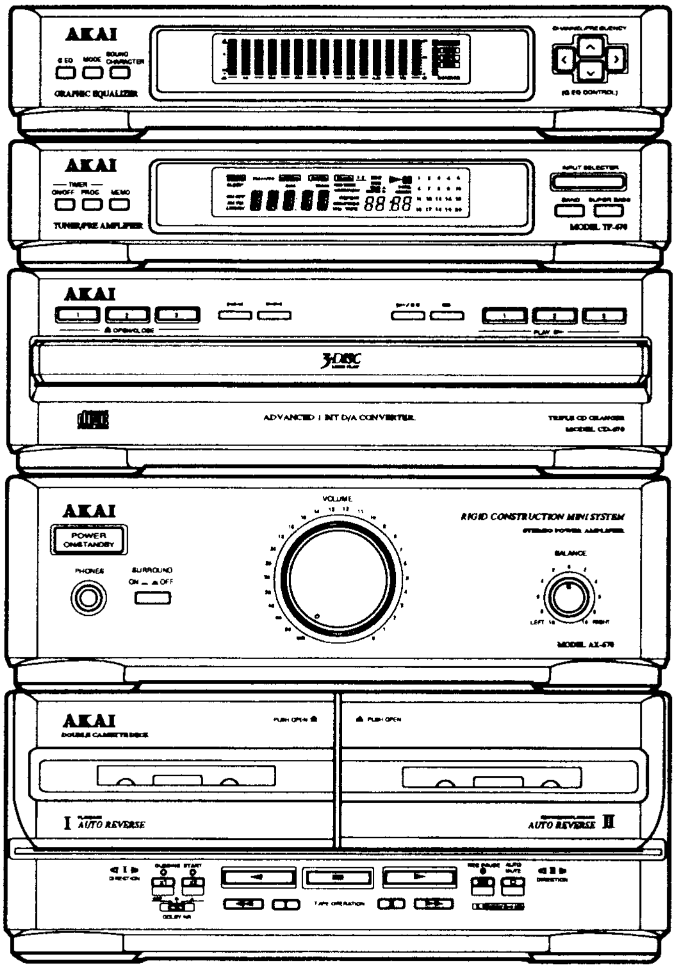
AKAI SERVICE MANUAL


AKAI
GRAPHIC EQUALIZER
AKAI
TUNER/PRE AMPLIFIER
MODEL TP-670
AKAI
3-DISC
ADVANCED 1 BIT D/A CONVERTER
TRIPLE CD CHANGER
MODEL CD-670
AKAI
POWER ON/STANDBY
PHONES
SURROUND
VOLUME
RIGID CONSTRUCTION MINI SYSTEM
BALANCE
MODEL AX-670
AKAI
I AUTO REVERSE
AUTO REVERSE II

SYSTEM MX-670

MINI COMPONENT SYSTEM

MX-570

(AX-570/CD-670/TP-570)

MX-670

(AX-670/CD-670/TP-670)

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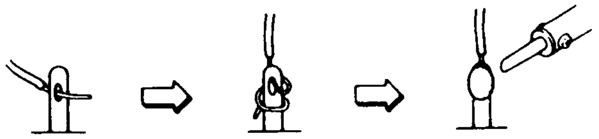
★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with the specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

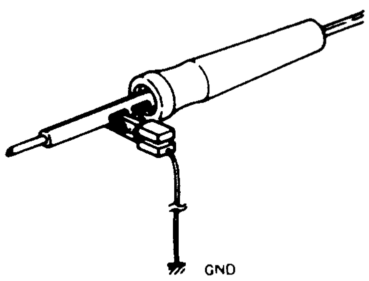
SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions.
The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

PRECAUTIONS IN REPAIRING

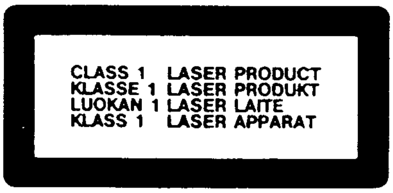
When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment, make sure that there are no metal obiects in the narrow gap between the P.C. board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs can be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.



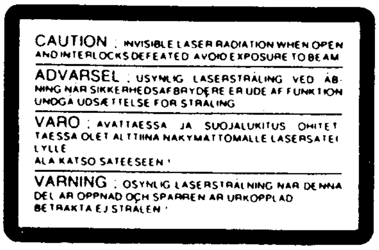
4. Do not loosen any screws in the pick-up block.
   When handling the pick-up block, please refer to the points to NOTE when replacing the pick up block.
5. To avoid hazardous invisible Laser Radiation, DO NOT look at the Laser Beam (Objective lens) directly.
6. On models for some countries, laser warning labels are affixed on the unit and inside of the unit, as shown below.For your safety, read these labels carefully when repairing or adjusting the unit.

[EUROPE, SCANDINAVIA, UK and AUSTRALIA]



CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT

Label affixed on the rear panel of the unit



CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED AVOID EXPOSURE TO BEAM

ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NAR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGA UDSÆTTELSE FOR STRALING

VARO : AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NAKYMATTOMALLE LASERSATEILYLLE
ALA KATSO SATEESEEN '

VARNING : OSYNLIG LASERSTRÅLNING NAR DENNA DEL AR OPPNAD OÇH SPARREN AR URKOPPLAD
BETRAKTA EJ STRALEN '

Label affixed on the reverse side of the rear panel of the unit (Except [U] model)

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can. Please leave them at an appropriate depot.

★INFORMATIONS

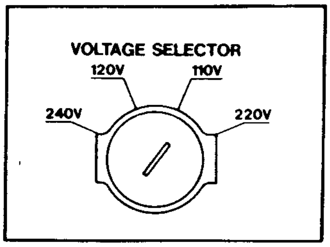
SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Principal Destination
B	UK
E	Europe (except UK)
S	Australia
V	Germany
U	Universal
Y*	Custom version

VOLTAGE CONVERSION (U Model only)

Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel of the AX-570/670 so that the correct voltage for your area is indicated.



PRECAUTION ABOUT THE POWER SUPPLY

The power supply of the CD-670 is supplied from the AX-570/670 through the TP-570/670. TP-570/670's power is supplied from the AX-570/670. Transmission of the system control signal between the TP-570/670 and other components (CD-770 and AX-570/670) is absolutely necessary to control the system. Therefore, when repairing one of the components of this MIDI COMPONENT SYSTEM, all components should normally be connected together. If all components are not available when repairing, the minimum combination of components that will be necessary to turn the power on are as follows.

- **TP-570**

Connect the two black and red CONTROL CONNECTORS to the AX-570. Then while pressing the TIMER ON/OFF and TIMER MEMORY buttons on the front panel simultaneously, connect the AC POWER CORD to the AC power outlet.

- **TP-670**

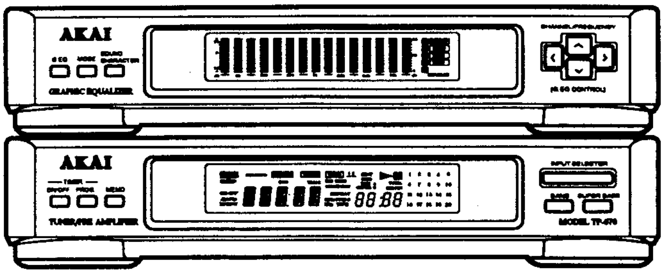
Connect the two black and red CONTROL CONNECTORS to the AX-670. Then connect the AC POWER CORD to the AC power outlet. Next, while pressing the FREQUENCY ∧ and > buttons on the front panel simultaneously, press the RESET button on the rear panel. Wait for a few seconds until the direction indicators on the AX-670 stop flashing.

- **CD-670**

Power for the CD-670 is supplied from the AX-570/670 though the TP-570/670.
Therefore, when repair of the CD-670 is necessary, repair should be made together with the AX-570/670 and TP-570/670.

- **AX-570/670**

While pressing the ▶ and ◀ buttons simultaneously on the AX-570/670, connect the AC power cord to the AC power outlet. In this case, cassette deck is operable but no sound will be output from the speakers.



MODEL TP-670

TUNER / PRE AMPLIFIER

MODEL TP-570/670

SPECIFICATIONS

Tuner section

FM

Tuning frequency range	87.5 to 108MHz
Usable sensitivity	13.2dBf [E/U], 17.2dBf [V] (IHF, 3% THD)
Quieting sensitivity	
Mono	17.2dBf [E/U], 21.2dBf [V]
Stereo	31.2dBf [E/U], 35.2dBf [V]
S/N ratio	
Mono	70dB [E/U], 65dB [V] (IHF)
Stereo	60dB (IHF)
Frequency response	30Hz to 15kHz (±1dB)
Total harmonic distortion	
Mono	0.5% (at 1kHz)
Stereo	0.3% [E/U], 0.7% [V] (at 1kHz)
Selectivity	55dB (±400kHz)
Image rejection	50dB
Stereo separation	45dB (at 1kHz)
Capture ratio	2dB
AM suppression	60dB
Spurious rejection	55dB
IF rejection	90dB

MW

Tuning frequency range	531 to 1602kHz (9kHz step)
[U] version	530 to 1710kHz (10kHz step) (9kHz/10kHz selectable)
Usable sensitivity	500µVm
S/N ratio	36dB
Selectivity	15dB
Image rejection	37dB
IF rejection	40dB

LW

Tuning frequency range	144 to 351kHz [E/U], 144 to 288kHz [V] (1kHz step)
Usable sensitivity	800µVm
S/N ratio	28dB
Selectivity	17dB
Image rejection	33dB
IF rejection	40dB

Amplifier Section

Super bass effects	+6dB / 60Hz (SB-1) +12dB / 60Hz (SB-2)
Tone control (TP-570 only)	
BASS	±8dB / 100Hz
TREBLE	±8dB / 10kHz
Graphic Equlizer (TP-670 only)	
Center frequency	63Hz /160Hz / 400Hz /1kHz / 2.5kHz / 6.3kHz / 16kHz
Control range	±10dB (2dB step)
S/N ratio	97dB (A-weight)
Total harmonic distortion	0.027% (1kHz, flat)
Timer	Quarts lock daily timer (Timer REC / Wake-up / Sleep)
Dimensions	
TP-570	270 (W) x112 (H) x 310 (D)mm
TP-670	270 (W) x112 (H) x 302 (D)mm
Weight	
TP-570	2.0kg
TP-670	2.1kg

Standard accessories

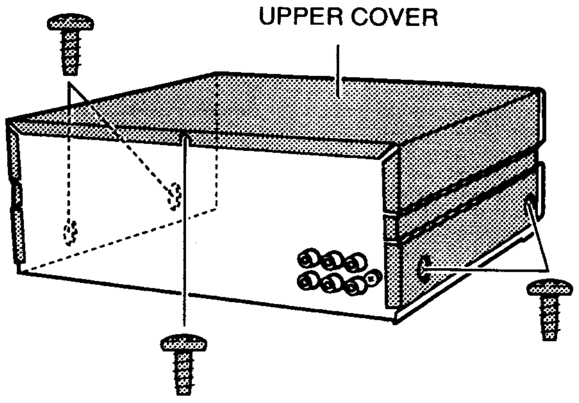
FM long wire antenna	x 1
AM loop antenna	x 1
Plug adaptor	x 1

*For improvement purposes, specifications and design are subject to change without notice.

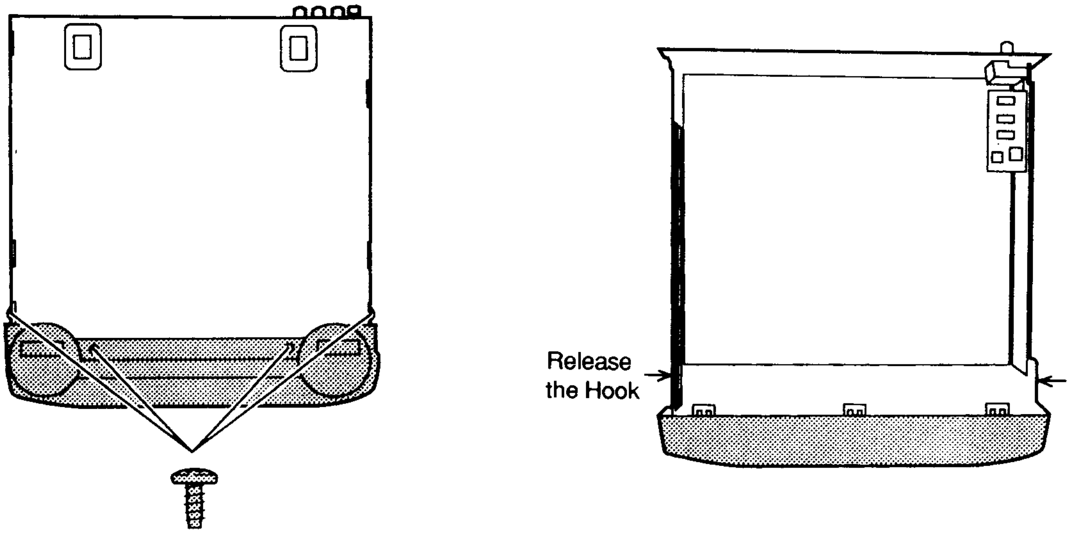
I. DISASSEMBLY

In case of trouble etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

1. Removal of UPPER COVER


UPPER COVER

2. Removal of FRONT PANEL


Release the Hook
Release the Hook

II. PRINCIPAL PARTS LOCATION

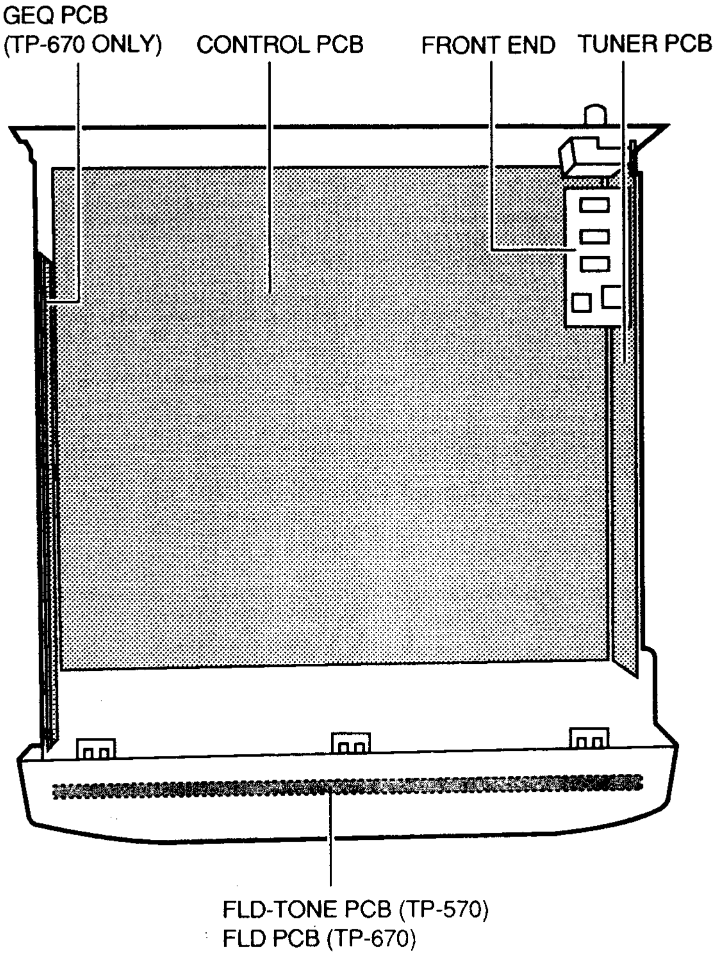

GEQ PCB
(TP-670 ONLY)
CONTROL PCB
FRONT END
TUNER PCB
FLD-TONE PCB (TP-570)
FLD PCB (TP-670)

Fig. 2-1 Top view

III. ADJUSTMENT

3-1.INSTRUMENT CONNECTIONS

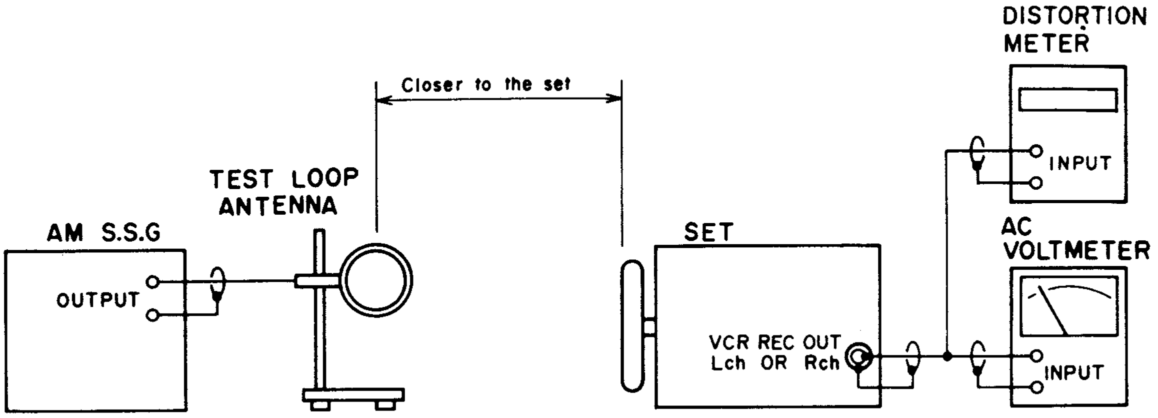

DISTORTION METER
INPUT
Closer to the set
TEST LOOP ANTENNA
AM S.S.G
OUTPUT
SET
AC VOLTMETER
VCR REC OUT Lch OR Rch
INPUT

Fig. 3-1 Instrument Connection of AM Adjustment

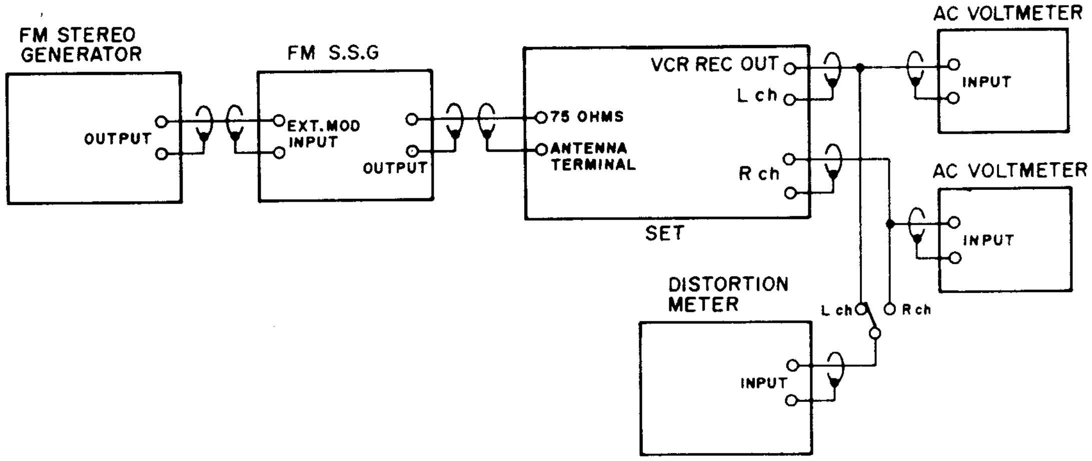

FM STEREO GENERATOR
OUTPUT
FM S.S.G
EXT.MOD INPUT
OUTPUT
75 OHMS
ANTENNA TERMINAL
VCR REC OUT
L ch
R ch
SET
AC VOLTMETER
INPUT
AC VOLTMETER
INPUT
DISTORTION METER
INPUT
L ch
R ch

Fig. 3-2 Instrument Connection of FM Adjustment

NOTE:
Before making adjustment, please set the input to "TUNER" mode by pressing the input SELECTOR button on the TP-570/670, then select the tuner band with the BAND button according to the adjustment procedure.

3-2.HOW TO CALL THE PRESET FREQUENCY FOR THE ADJUSTMENT

Preset frequency can be called with the "TUNER/CD 10 KEY" buttons on the remote control (Press the RESET button on the rear panel first to initialize the previous memory). The internal frequency preset memory is set as shown below.

Initial preset frequency for adjustment and inspection.

PRESET ch No.	PRODUCT DESTINATION	
	E, B, U, S	V
1	FM 98.00 MHz AUTO	FM 98.00 MHz AUTO
2	FM 88.00 MHz MONO	FM 88.00 MHz MONO
3	FM 108.00 MHz MONO	FM 108.00 MHz MONO
4	LW 162 kHz	LW 162 kHz
5	LW 297 kHz	LW 288 kHz
6	LW 198 kHz	LW 198 kHz
7	MW 1404 kHz	MW 1404 kHz
8	MW 603 kHz	MW 603 kHz
9	MW 999 kHz	MW 999 kHz
10	LW 351 kHz	LW 288 kHz
11	FM 87.50 MHz MONO	MW 1602 kHz
12	FM 90.00 MHz MONO	FM 90.00 MHz MONO
13	FM 106.00 MHz MONO	FM 106.00 MHz MONO
14	MW 531 kHz	MW 531 kHz
15	MW 1602 kHz	MW 1602 kHz
16	LW 144 kHz	LW 144 kHz
17	LW 288 kHz	FM 87.50 MHz AUTO
18 to 30	FM 87.50 MHz AUTO	

NOTE : ABOUT TUNING STEP CONVERSION (U version only)

The MW frequency band of this tuner is preset to 9kHz tuning intervals. However, the frequencies of MW broadcasts in some countries are set at 10kHz intervals.

If your country uses 10kHz tuning intervals the following tuning step conversion is necessary before you can tune in stations.

1. Turn the amplifier's power on.
2. Press the BAND button until the AM indicator appears on the tuner's FL display
3. Press and hold the BAND button for over 5 seconds until "AM 1710kHz" appears on the FL display. Tuning intervals will now be set to 10kHz.

※ LW frequency band can not be selected with BAND button at MW 10kHz tuning intervals mode.

To reset the tuner to 9kHz tuning intervals :

■ Press the RESET button located on the tuner's rear panel with a ball point pen etc.

3-3. ADJUSTMENT

NOTE: 1. Set the S.S.G. to 1kHz, 75kHz deviation for $\boxed{U}$, $\boxed{S}$, $\boxed{B}$ or $\boxed{E}$ model, 1 kHz, 40 kHz deviation for $\boxed{V}$ model.

STEP	ADJUSTMENT ITEM
1.	SSG FREQ. & OUTPUT LEVEL
2.	SET Tuning FREQ.
3.	ADJ. Part
4.	REMARKs (•) & RESULT (∗)

Test Point   Adjustment Part

AM

NOTE: 1. Set the S.S.G to 1kHz 30% modulation on each adjustment.
2. Frequencies indicated in < > are for the $\boxed{V}$ model.

1 | LW OSC

1. –
2. 351kHz <288kHz> (preset 10 ch)
3. T204
4. • Connect the Digital DC Voltmeter between TP1 and GND.
   ∗ 8.2 ± 0.1V <5.75 ± 0.1V>.

2 | LW SENSITIVITY

1. 162kHz, 75dBμ (Low) and 297kHz <288kHz>, 75dBμ (High)
2. 162kHz (preset 4 ch), 297kHz <288kHz> (preset 5 ch).
3. T202 (Low), VC202 (High)
4. • Connect the milli-voltmeter to VCR/REC OUT.
   ∗ Maximum output level and minimum distortion.
   ∗ For best result, repeat Low and High adjustments several times.

3 | AM IF

1. 162kHz, 65dBμ
2. 162 kHz (preset 4 ch)
3. T205
4. • Connect the milli-voltmeter to VCR/REC OUT.
   ∗ Maximum output level and minimum distortion

4 | AM TUNED INDICATOR

1. 198kHz, 62dBμ
2. 198kHz (preset 6 ch)
3. Tuning indicator on the front panel, VR103.
4. ∗ Tuning indicator is lit.

5 | MW OSC

1. –
2. 1,404kHz (preset 7 ch)
3. T203
4. • Connect the Digital DC Voltmeter between TP1 and GND.
   ∗ 6.7 ± 0.1V.

6 | MW SENSITIVITY

1. 603kHz, 65dBμ (Low) or 1,404kHz, 65dBμ (High)
2. 603kHz (Low), (preset 8 ch) 1,404kHz (High), (preset 7 ch)
3. T201 (Low), VC201 (High)
4. • Connect the milli-voltmeter to VCR/REC OUT.
   ∗ Maximum output level and minimum distortion.
   ∗ For best result, repeat Low and High adjustments several times.

FM

1 | CENTER VOLTAGE

1. 98.0MHz, 60dBμ (MONO)
2. 98.0MHz (preset 1 ch)
3. T101
4. • Connect the DC Digital Voltmeter to both ends of R108.
   ∗ 0 ± 50mV

2 | FM TUNED INDICATOR

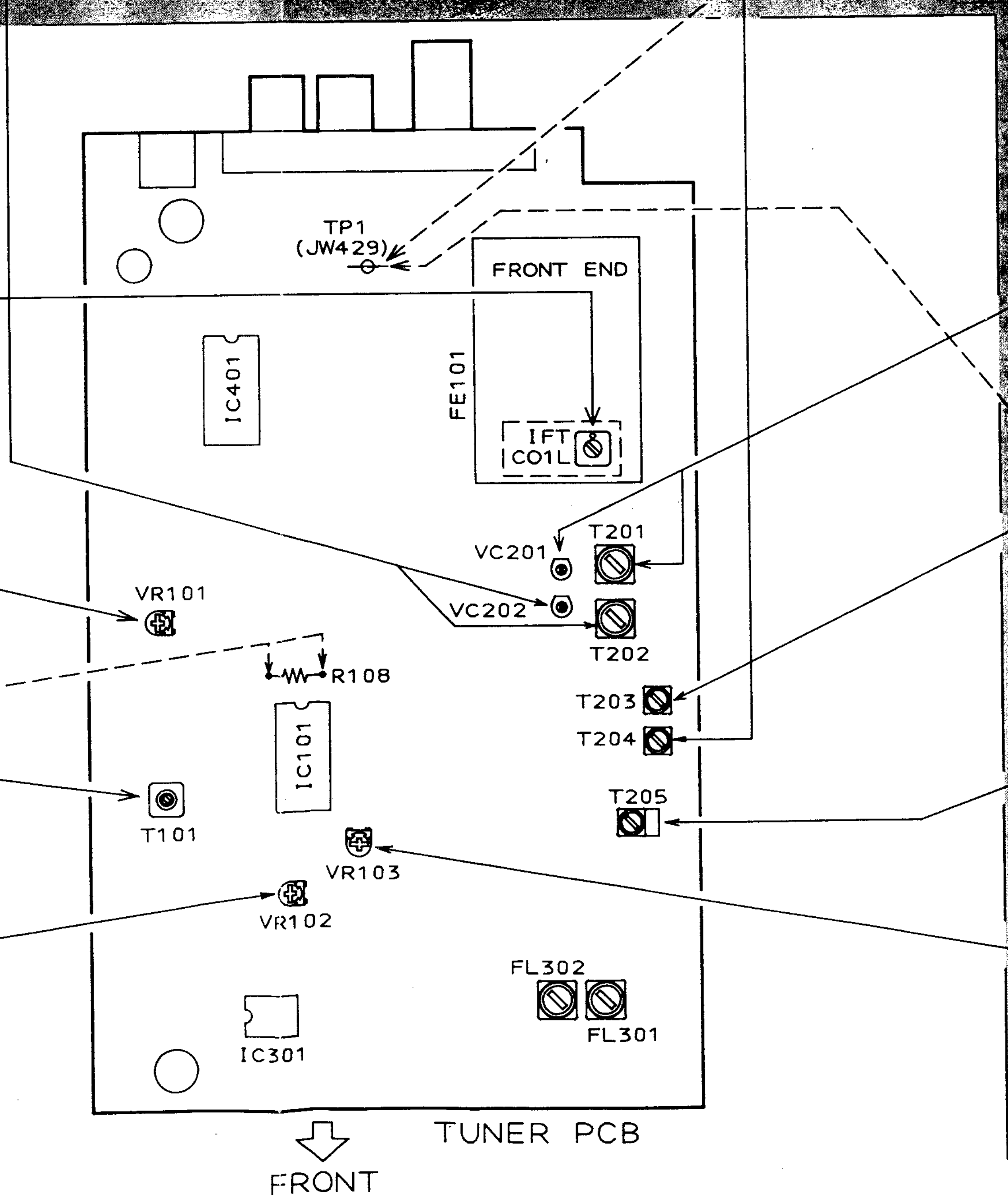
1. 98.0MHz, 18dBμ (MONO)
2. 98.0MHz (preset 1 ch)
3. Tuning indicator on the front panel, VR101.
4. ∗ Tuning indicator is lit.

3 | DISTORTION (STEREO)

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz (FM AUTO) (preset 1 ch)
3. IFT (FRONT END)
4. • Connect the distortion meter to VCR/REC OUT.
   ∗ Minimum Distortion (Never turn the IFT more than 90°)

4 | STEREO SEPARATION

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz (FM AUTO) (preset 1 ch)
3. VR102
4. • Connect the milli-voltmeter to VCR/REC OUT.
   ∗ Minimum output level for opposite channel.



IV. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of change, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A)	[S] :SAA (Australia)
[B] :BEAB (England)	[U] :U/T (Universal Area)
[C] :CSA (Canada)	
[E] :CEE (Europe)	[V] :VDE (Germany)
[J] :JPN (Japan)	[Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	*EC-410588J	C DOUBLE FYD0H474Z 5.5DC
2	ED-394723J	D LED GL3HY44 YELLOW
3	ED-403757J	D LED SEL2913K D,Y1 D,Y2ORANGE
4	ED-307572	D SILICON H 1SS131
5	ED-624903	D SILICON H 1S2473
6	*ED-511907	D SILICON 1N4002 100/1.0A
7	ED-372893	D VARACTOR SVC321SPA A DBL
8	ED-402212J	D ZENER H HZS12A1
9	ED-397289J	D ZENER H HZS20-2
10	ED-367576	D ZENER H HZS5.6B2J
11	ED-389688J	D ZENER H HZS5B2
12	ED-370786	D ZENER H HZS9.1B2J
13	ED-346559	D ZENER H HZ12B2L
14	ED-346560	D ZENER H HZ12B3L
15	ED-337990	D ZENER H HZ27-1L
16	ED-329058	D ZENER H HZ5 C1
17	ED-346531	D ZENER H HZ7A2L
18	ED-351418	D ZENER H HZ7B1L
19	ED-346534	D ZENER H HZ7C1L
20	EE-408686J	FRONT END FE415-G10
21	EH-364919	COMP R RKC8BS 473J
22	EH-408650J	COMP R RYLS7J105 105J
23	EH-394759J	FILTER CE SFE10.7MS2GK-A [U,E]
24	EH-338338	FILTER CE SFE10.7MS3GK-A [V]
25	EH-410605J	FILTER EMI FBA04HA900KE-00 F12 [V]
26	EH-405199J	FILTER LC LP K7-J1YD-0170 [V]
27	EH-408815J	FILTER LC LP 42B-5226-03
28	EI-382660J	IC BA15218-DX
29	EI-387938J	IC HD74LS05P
30	EI-408673J	IC LA1851N
31	EI-408648J	IC LA3607
32	EI-408647J	IC LC7522
33	EI-408645J	IC LC866008A-5199 MXA1GE1
34	EI-354951	IC LM7000N
35	EI-408675J4	IC M38173M6-155FP MXA1TP4
36	EI-213390	IC NJM4558D
37	EI-400756J	IC NJM4558L-B
38	EI-408672J	IC S-80721AN
39	EI-302233	IC TC4051BP
40	EI-332259	IC TC4052BP
41	EI-200573	IC TC4053BP
42	EI-408646J	IC XR1091ECP
43	EI-408674J	OSC CE CSB456F15 19.000KHZ
44	EI-408649J	OSC CE CST12.0MTW 12.000MHZ
45	EI-405327J	OSC CE CST6.00MGW 6.000MHZ
46	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
47	EI-408814M	OSC X'TAL HC-49/U 7200KHZ
48	EM-408410J	IND FL BJ035GK DOUBLE
49	EM-408409J	IND FL 10-MT-44GK CHARACTER
50	EO-408689M	COIL DET 1 499HNAS0078Z10.7MHZ
51	EO-408687J	COIL IFT BCFAZ-024
52	EO-363279	COIL OSC 2 A7NRS-9857X 150.0UH
53	EO-352089	COIL OSC 2 7BRS-9098X 580.0UH
54	EO-408808M	COIL VARI 2 MRHNF-45614A
55	EO-408809M	COIL VARI 2 MRZNF-45615A
56	*EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
57	*ER-326169	R FUSE H S10 ERD2FC 1/4W 22R0G
58	*ER-331619	R FUSE H S10 ERD2FC 1/4W 39R0G
59	*ER-318647	R FUSE H S10 ERD2FC 1/4W 4R7J
60	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
61	*ER-386215J	R OMF H S12 FS 1W 220J
62	*ER-408692J	R OMF H S15 FS 2W 390J
63	ES-408641J	SW TACT EVQ 233 07K T05
64	ES-362883	SW TACT SKHHLM
65	ET-411995J	DETECTOR GP1U581X
66	ET-356336	TR DTA114ES
67	ET-369248	TR DTA114YS
68	ET-354370	TR DTA124ES
69	ET-354415	TR DTA144ES
70	ET-353897	TR DTC114ES
71	ET-354371	TR DTC124ES
72	ET-373392	TR DTC124XS
73	ET-354364	TR DTC143TS
74	ET-354414	TR DTC144ES
75	ET-354094	TR DTC144WS
76	ET-349458	TR FET 2SK192A Y
77	ET-337759	TR FET 2SK246 GR
78	ET-353899	TR 2SA1317 S,T,U
79	*ET-366365	TR 2SB1185 E,F
80	ET-400965J	TR 2SB1357 E,F T05
81	ET-397160J	TR 2SC3330 R,S,T,U,V
82	ET-361736	TR 2SC3576
83	ET-394735J	TR 2SC3792 T05
84	ET-356437	TR 2SC930 D2,E,F
85	*ET-366581	TR 2SD1762 E,F
86	*ET-373025	TR 2SD1944 J1,J2,K
87	ET-401091J	TR 2SD2144S U,V,W T05
88	ET-396072J	TR 2SD2159 V,W
89	EV-408643J	VR ROTARY RK14K1240L=15 B103X2
90	EV-408642J	VR ROTARY RK14K1240L=20 B103X2
91	EW-408817J2	CORD A6007 L=160 13P
92	EW-408816J2	CORD A6007 L=160 9P
93	EW-408681J1	WIRE ASSY HFG0711-5201L530 11P
94	EW-408676J	WIRE ASSY HFG07157601 L580 15P
95	EW-408679J	WIRE ASSY 52305-1411 L=650 14P

2. P.C BOARD BLK

Ref. No.	Part No.	Description
1A	BA-A6007T030A	ML PC (#) TU-PRE BLK TP-550 (U)/ML [TP-570]
1B	BA-A6007T030B	ML PC (#) TU-PRE BLK TP-550 (E)/ML [TP-570]
1C	BA-A6007T035A	ML PC (#) TU-PRE BLK TP-570 (V)/ML
1D	BA-A6007T030D	ML PC (#) TU-PRE BLK TP-650 (U)/ML [TP-670]
1E	BA-A6007T030E	ML PC (#) TU-PRE BLK TP-650 (E)/ML [TP-670]
1F	BA-A6007T035B	ML PC (#) TU-PRE BLK TP-670 (V)/ML
2	BA-A6007T040A	ML PC FL-TON BLK TP-550/ML [TP-570]
3A	BA-A6008T050C	ML PC (#) FL-GEQ BLK TP-670 (E)/ML [U,E]
3B	BA-A6008T050D	ML PC (#) FL-GEQ BLK TP-670 (V)/ML [V]

PC (#) TU-PRE BLK CONSISTS OF FOLLOWING P.C BOARDS.

- TUNER P.C BOARD
- CONTROL P.C BOARD

PC (#) FL-GEQ BLK CONSISTS OF FOLLOWING P.C BOARDS.

- FLD P.C BOARD
- GEQ P.C BOARD

3. TUNER P.C BOARD

Ref. No.	Part No.	Description
D101	ED-307572	D SILICON H 1SS131
D201	ED-372893	D VARACTOR SVC321SPA A DBL
D202	ED-372893	D VARACTOR SVC321SPA A DBL
D203	ED-307572	D SILICON H 1SS131
D204	ED-307572	D SILICON H 1SS131
D401	ED-367576	D ZENER H HZS5.6B2J
D402	ED-307572	D SILICON H 1SS131
D403	ED-307572	D SILICON H 1SS131
D404	ED-307572	D SILICON H 1SS131
D405	ED-370786	D ZENER H HZS9.1B2J
D406	ED-389688J	D ZENER H HZS5B2
FE101	EE-408686J	FRONT END FE415-G10
FL102A	EH-394759J	FILTER CE SFE10.7MS2GK-A [U,E]
FL102B	EH-338338	FILTER CE SFE10.7MS3GK-A [V]
FL103A	EH-394759J	FILTER CE SFE10.7MS2GK-A [U,E]

Ref. No.	Part No.	Description
FL103B	EH-338338	FILTER CE SFE10.7MS3GK-A [V]
FL104	EH-405199J	FILTER LC LP K7-J1YD-0170 [V]
FL105	EH-410605J	FILTER EMI FBA04HA900KE-00 F12 [V]
FL301	EH-408815J	FILTER LC LP 42B-5226-03
FL302	EH-408815J	FILTER LC LP 42B-5226-03
IC101	EI-408673J	IC LA1851N
IC301	EI-213390	IC NJM4558D
IC401	EI-354951	IC LM7000N
L101	EO-357539	COIL FIX 1 EL0606RA T05 222K
L301	EO-353588	COIL FIX 1 LAP02 F05 2R2K [V]
L302	EO-353588	COIL FIX 1 LAP02 F05 2R2K [V]
R107	ER-324184	R CB H S10 FS RDS 1/4W 121J
R108	ER-333387	R CB H S10 FS RDS 1/4W 223J
R425	*ER-318647	R FUSE H S10 ERD2FC 1/4W 4R7J
T101	EO-408689M	COIL DET 1 499HNAS0078Z10.7MHZ
T201	EO-408808M	COIL VARI 2 MRHNF-45614A
T202	EO-408809M	COIL VARI 2 MRZNF-45615A
T203	EO-363279	COIL OSC 2 A7NRS-9857X 150.0UH
T204	EO-352089	COIL OSC 2 7BRS-9098X 580.0UH
T205	EO-408687J	COIL IFT BCFAZ-024
TM1	EJ-359031	TERMINAL LEVER YKD31-0215 P 2P
TR101	ET-356437	TR 2SC930 D2,E,F
TR102	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-349458	TR FET 2SK192A Y
TR202	ET-394735J	TR 2SC3792 T05
TR203	ET-353897	TR DTC114ES
TR401	ET-337759	TR FET 2SK246 GR
TR402	ET-397160J	TR 2SC3330 R,S,T,U,V
TR403	ET-354094	TR DTC144WS
TR404	ET-354094	TR DTC144WS
TR405	ET-354094	TR DTC144WS
TR406	ET-353899	TR 2SA1317 S,T,U
TR407	ET-353899	TR 2SA1317 S,T,U
TR408	ET-396072J	TR 2SD2159 V,W
VC201	EC-337603	C S-FIX H VCT51F 5.5-30
VC202	EC-356284	C S-FIX H VCT51G 7.5- 50
VR101	EV-358829	R S-FIX H RH0615C 0.10W 223
VR102	EV-356576	R S-FIX H RH0615C 0.10W 472
VR103	EV-356576	R S-FIX H RH0615C 0.10W 472
X101	EI-408674J	OSC CE CSB456F15 19.000KHZ
X401	EI-408814M	OSC X'TAL HC-49/U 7200KHZ

4. CONTROL P.C BOARD

Ref. No.	Part No.	Description
C764	*EC-346868	C CE V T05 F 473Z 50DC
C765	*EC-346868	C CE V T05 F 473Z 50DC
C766	*EC-346868	C CE V T05 F 473Z 50DC
C767	*EC-346868	C CE V T05 F 473Z 50DC
C801	*EC-410588J	C DOUBLE FYD0H474Z 5.5DC
D701	ED-346534	D ZENER H HZ7C1L
D702	ED-346534	D ZENER H HZ7C1L
D751	*ED-511907	D SILICON 1N4002 100/1.0A
D752	*ED-511907	D SILICON 1N4002 100/1.0A
D753	*ED-511907	D SILICON 1N4002 100/1.0A
D754	*ED-511907	D SILICON 1N4002 100/1.0A
D755	ED-346559	D ZENER H HZ12B2L
D756	ED-346560	D ZENER H HZ12B3L
D757	*ED-511907	D SILICON 1N4002 100/1.0A
D758	*ED-511907	D SILICON 1N4002 100/1.0A
D759	*ED-511907	D SILICON 1N4002 100/1.0A
D760	ED-337990	D ZENER H HZ27-1L
D761	*ED-511907	D SILICON 1N4002 100/1.0A
D762	*ED-511907	D SILICON 1N4002 100/1.0A
D763	ED-351418	D ZENER H HZ7B1L
D764	ED-346531	D ZENER H HZ7A2L
D765	*ED-511907	D SILICON 1N4002 100/1.0A
D766	ED-511907	D SILICON 1N4002 100/1.0A
D767	ED-511907	D SILICON 1N4002 100/1.0A
D768	ED-329058	D ZENER H HZ5 C1
D801	ED-307572	D SILICON H 1SS131
D802	ED-307572	D SILICON H 1SS131
D803	ED-307572	D SILICON H 1SS131
D804	ED-307572	D SILICON H 1SS131
D805	ED-307572	D SILICON H 1SS131
D807	ED-307572	D SILICON H 1SS131 [U]
D808	ED-307572	D SILICON H 1SS131 [V]
D809	ED-307572	D SILICON H 1SS131 [670]
D811	ED-511907	D SILICON 1N4002 100/1.0A
D812	ED-511907	D SILICON 1N4002 100/1.0A
D813	ED-307572	D SILICON H 1SS131
D814	ED-511907	D SILICON 1N4002 100/1.0A
D815	ED-307572	D SILICON H 1SS131
D821	ED-397289J	D ZENER H HZS20-2
D822	ED-307572	D SILICON H 1SS131
FL106	EH-410605J	FILTER EMI FBA04HA900KE-00 F12 [V]
IB801	EH-364919	COMP R RKC8BS 473J
IC501	EI-302233	IC TC4051BP
IC502	EI-200573	IC TC4053BP
IC601	EI-302233	IC TC4051BP
IC602	EI-200573	IC TC4053BP
IC701	EI-382660J	IC BA15218-DX
IC702	EI-400756J	IC NJM4558L-B
IC703	EI-400756J	IC NJM4558L-B
IC704	EI-332259	IC TC4052BP
IC801	EI-408675J4	IC M38173M6-155FP MXA1TP4
IC802	EI-387938J	IC HD74LS05P
IC804	EI-408672J	IC S-80721AN
J11A	EJ-408669J	PIN J T6060AABF W/SHIELD 6P [U,E]
J11B	EJ-408668J	PIN J T5916-AABH 6P [V]
R751	*ER-386215J	R OMF H S12 FS 1W 220J
R752	*ER-386215J	R OMF H S12 FS 1W 220J
R759	*ER-386215J	R OMF H S12 FS 1W 220J
R764	*ER-326169	R FUSE H S10 ERD2FC 1/4W 22R0G
R765	*ER-408692J	R OMF H S15 FS 2W 390J
TR501	ET-394735J	TR 2SC3792 T05
TR502	ET-394735J	TR 2SC3792 T05
TR512	ET-397160J	TR 2SC3330 R,S,T,U,V
TR601	ET-394735J	TR 2SC3792 T05
TR602	ET-394735J	TR 2SC3792 T05
TR612	ET-397160J	TR 2SC3330 R,S,T,U,V
TR752	*ET-373025	TR 2SD1944 J1,J2,K
TR753	ET-353899	TR 2SA1317 S,T,U
TR754	*ET-366365	TR 2SB1185 E,F
TR755	ET-353899	TR 2SA1317 S,T,U
TR756	*ET-366365	TR 2SB1185 E,F
TR757	ET-397160J	TR 2SC3330 R,S,T,U,V
TR758	*ET-366581	TR 2SD1762 E,F
TR759	ET-397160J	TR 2SC3330 R,S,T,U,V
TR760	ET-353899	TR 2SA1317 S,T,U
TR761	ET-353899	TR 2SA1317 S,T,U
TR801	ET-354371	TR DTC124ES
TR802	ET-354371	TR DTC124ES
TR803	ET-354371	TR DTC124ES
TR804	ET-354371	TR DTC124ES
TR805	ET-354371	TR DTC124ES
TR806	ET-353897	TR DTC114ES
TR807	ET-354371	TR DTC124ES
TR808	ET-354370	TR DTA124ES
TR809	ET-373392	TR DTC124XS
TR810	ET-369248	TR DTA114YS
TR811	ET-353897	TR DTC114ES
TR812	ET-354370	TR DTA124ES
TR815	ET-353899	TR 2SA1317 S,T,U
TR816	ET-354371	TR DTC124ES
TR817	ET-356336	TR DTA114ES
TR818	ET-401091J	TR 2SD2144S U,V,W T05
TR819	ET-401091J	TR 2SD2144S U,V,W T05
TS801	ES-362883	SW TACT SKHHLM
W1	EW-408676J	WIRE ASSY HFG07157601 L580 15P
W2	EW-408679J	WIRE ASSY 52305-1411 L=650 14P
W3	EW-408681J1	WIRE ASSY HFG0711-5201L530 11P
X801	EI-405327J	OSC CE CST6.00MGW 6.000MHZ
X802	EI-368825M	OSC X'TAL C-002RX 32768KHZ

5. FLD/TONE P.C BOARD (TP-570)

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D5	ED-307572	D SILICON H 1SS131
D6	ED-307572	D SILICON H 1SS131
D7	ED-403757J	D LED SEL2913K D,Y1 D,Y2ORANGE
D8	ED-403757J	D LED SEL2913K D,Y1 D,Y2ORANGE
D9	ED-403757J	D LED SEL2913K D,Y1 D,Y2ORANGE
D10	ED-307572	D SILICON H 1SS131
IC1	EI-400756J	IC NJM4558L-B
IC2	EI-400756J	IC NJM4558L-B
IN1	EM-408409J	IND FL 10-MT-44GK CHARACTER
PH1	ET-411995J	DETECTOR GP1U581X
TR1	ET-353899	TR 2SA1317 S,T,U
TS1	ES-408641J	SW TACT EVQ 233 07K T05
TS2	ES-408641J	SW TACT EVQ 233 07K T05
TS3	ES-408641J	SW TACT EVQ 233 07K T05
TS4	ES-408641J	SW TACT EVQ 233 07K T05
TS5	ES-408641J	SW TACT EVQ 233 07K T05
TS6	ES-408641J	SW TACT EVQ 233 07K T05
TS7	ES-408641J	SW TACT EVQ 233 07K T05
TS8	ES-408641J	SW TACT EVQ 233 07K T05
TS9	ES-408641J	SW TACT EVQ 233 07K T05
TS10	ES-408641J	SW TACT EVQ 233 07K T05
VR1	EV-408642J	VR ROTARY RK14K1240L=20 B103X2
VR2	EV-408643J	VR ROTARY RK14K1240L=15 B103X2
W2	EW-408817J2	CORD A6007 L=160 13P
W3	EW-408817J2	CORD A6007 L=160 13P
W4	EW-408816J2	CORD A6007 L=160 9P

6. FLD P.C BOARD (TP-670)

Ref. No.	Part No.	Description
D101	ED-624903	D SILICON H 1S2473
D102	ED-624903	D SILICON H 1S2473
D103	ED-624903	D SILICON H 1S2473
D104	ED-624903	D SILICON H 1S2473
D105	ED-307572	D SILICON H 1SS131
D106	ED-307572	D SILICON H 1SS131
D107	ED-307572	D SILICON H 1SS131
D108	ED-307572	D SILICON H 1SS131
D109	ED-394723J	D LED GL3HY44 YELLOW
D110	ED-307572	D SILICON H 1SS131
D111	ED-307572	D SILICON H 1SS131
IC101	EI-408645J	IC LC866008A-5199 MXA1GE1
IN101	EM-408409J	IND FL 10-MT-44GK CHARACTER
IN102	EM-408410J	IND FL BJ035GK DOUBLE
PH101	ET-411995J	DETECTOR GP1U581X
TR102	ET-354414	TR DTC144ES
TR103	ET-356336	TR DTA114ES
TR105	ET-354364	TR DTC143TS
TR106	ET-361736	TR 2SC3576
TR107	ET-361736	TR 2SC3576
TR108	ET-354414	TR DTC144ES
TS101	ES-408641J	SW TACT EVQ 233 07K T05
TS102	ES-408641J	SW TACT EVQ 233 07K T05
TS103	ES-408641J	SW TACT EVQ 233 07K T05
TS104	ES-408641J	SW TACT EVQ 233 07K T05
TS105	ES-408641J	SW TACT EVQ 233 07K T05
TS106	ES-408641J	SW TACT EVQ 233 07K T05
TS107	ES-408641J	SW TACT EVQ 233 07K T05
TS108	ES-408641J	SW TACT EVQ 233 07K T05
TS109	ES-408641J	SW TACT EVQ 233 07K T05
TS110	ES-408641J	SW TACT EVQ 233 07K T05
TS111	ES-408641J	SW TACT EVQ 233 07K T05
TS112	ES-408641J	SW TACT EVQ 233 07K T05
TS113	ES-408641J	SW TACT EVQ 233 07K T05
W101	EW-408816J2	CORD A6007 L=160 9P
W102	EW-408817J2	CORD A6007 L=160 13P
W103	EW-408817J2	CORD A6007 L=160 13P
X101	EI-408649J	OSC CE CST12.0MTW 12.000MHZ

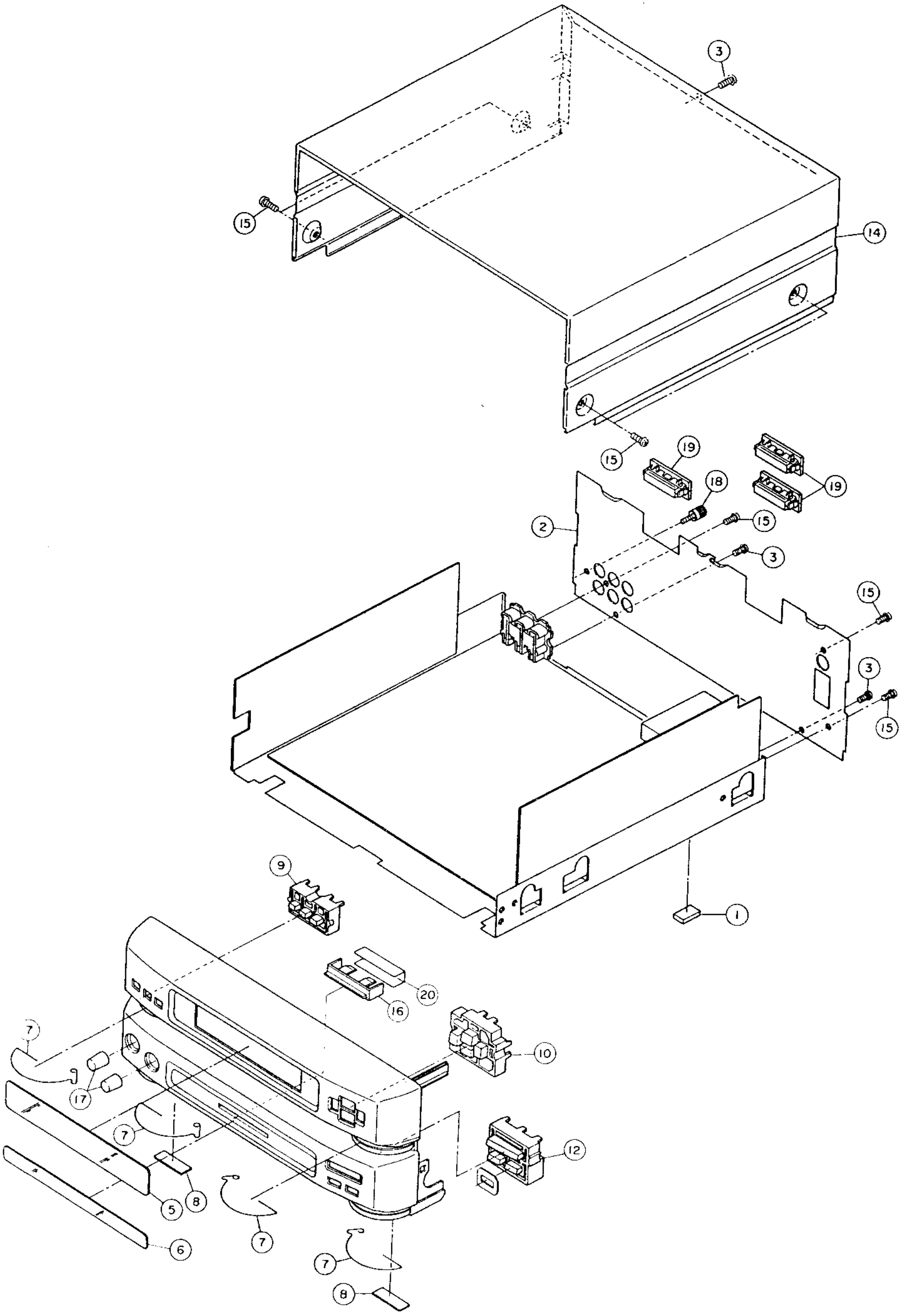
7. GEQ P.C BOARD (TP-670)

Ref. No.	Part No.	Description
D201	ED-511907	D SILICON 1N4002 100/1.0A
D202	ED-511907	D SILICON 1N4002 100/1.0A
D203	ED-511907	D SILICON 1N4002 100/1.0A
D204	ED-511907	D SILICON 1N4002 100/1.0A
D205	ED-408807J	D ZENER H HZS12C3
D206	ED-408807J	D ZENER H HZS12C3
D207	ED-397103J	D ZENER H HZS6A1
FR201	*ER-331619	R FUSE H S10 ERD2FC 1/4W 39R0G
FR202	*ER-318248	R FUSE H S10 ERD2FC 1/4W 47R0G
IB201	EH-408650J	COMP R RYLS7J105 105J
IB202	EH-408650J	COMP R RYLS7J105 105J
IC201	EI-408647J	IC LC7522
IC202	EI-408648J	IC LA3607
IC203	EI-408648J	IC LA3607
IC204	EI-400756J	IC NJM4558L-B
IC205	EI-408646J	IC XR1091ECP
IC206	EI-332259	IC TC4052BP
TR201	ET-394735J	TR 2SC3792 T05
TR202	ET-394735J	TR 2SC3792 T05
TR203	ET-356336	TR DTA114ES
TR204	ET-354414	TR DTC144ES
TR205	ET-366581	TR 2SD1762 E,F
TR206	ET-400965J	TR 2SB1357 E,F T05
TR207	ET-353899	TR 2SA1317 S,T,U
TR208	ET-353899	TR 2SA1317 S,T,U
TR209	ET-354414	TR DTC144ES

8. SUB P.C BOARD ([V] MODEL ONLY)

Ref. No.	Part No.	Description
D1	ED-402212J	D ZENER H HZS12A1
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
RL1	*EQ-403529J1	RELAY POW 12S MBU524UL3 2NO12V
TR1	ET-366581	TR 2SD1762 E,F
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V
TR5	ET-354415	TR DTA144ES
TR6	ET-354415	TR DTA144ES
TR7	ET-397160J	TR 2SC3330 R,S,T,U,V
TR8	ET-397160J	TR 2SC3330 R,S,T,U,V
TR9	ET-354415	TR DTA144ES [670]
TR10	ET-354415	TR DTA144ES [670]
TR11	ET-397160J	TR 2SC3330 R,S,T,U,V [670]
TR12	ET-397160J	TR 2SC3330 R,S,T,U,V [670]
TR13	ET-354414	TR DTC144ES [670]

FINAL ASSEMBLY (TP-570)



9. FINAL ASSEMBLY (TP-570)

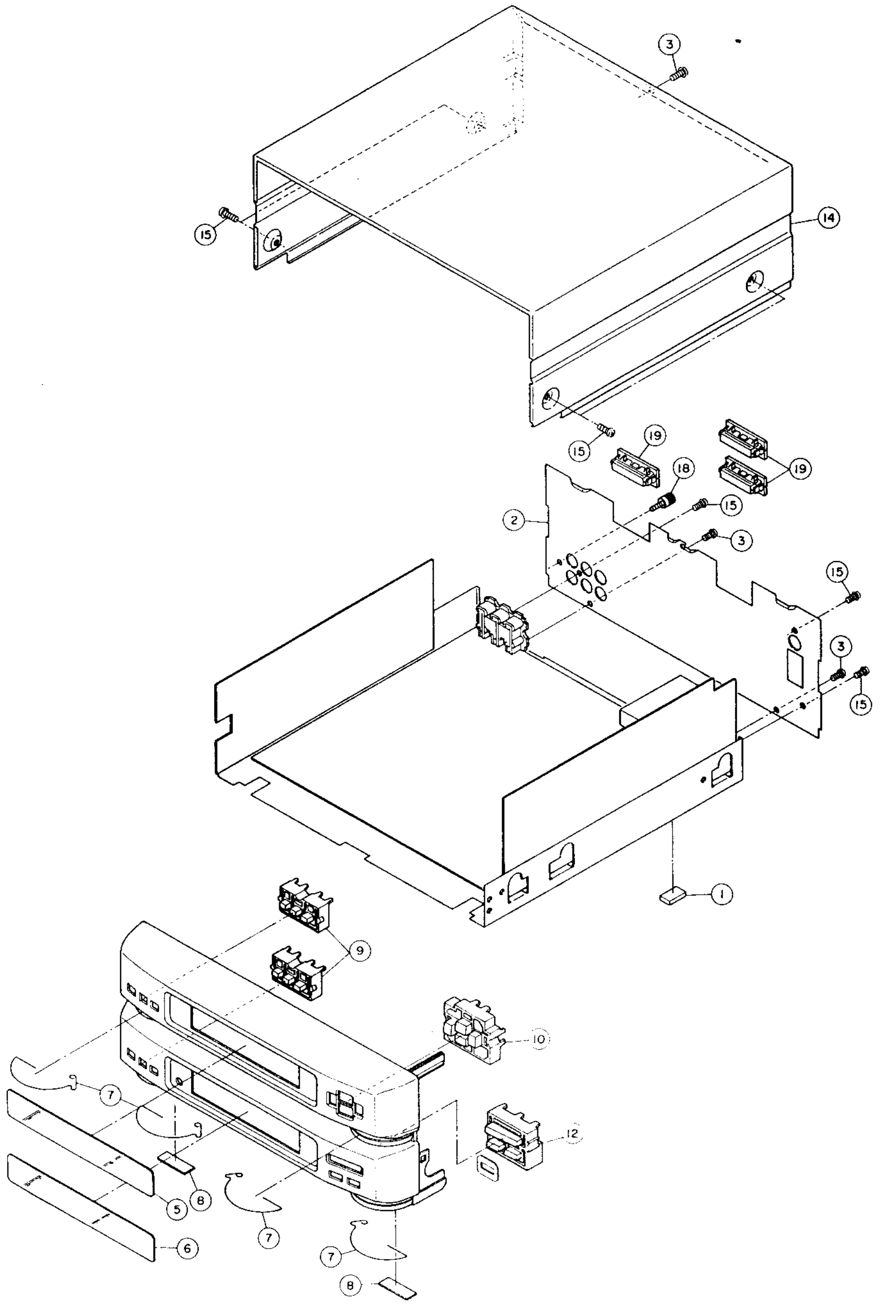
Ref. No.	Part No.	Description
1	SA-407840M	CUSHION FOOT REAR (SG)
2A	SP-414443M	PANEL REAR TP-570 (U) (SG)
2B	SP-414449M	PANEL REAR TP-570 (E) (SG)
2C	SP-414444M	PANEL REAR TP-570 (V) (SG)
3	ZS-394412J	BT BID30X08STL BZN PROJECTION
4	SP-414241M	PANEL FRONT TP-570 (SG)
5	SE-414247M	WINDOW-A (SG)
6	SE-414248M	WINDOW-B (SG)
7	SZ-414249M	RING FOOT (SG)
8	SA-394136M	CUSHION FOOT (SG)
9	SB-414242M	BUTTON TIMER (SG)
10	SB-414244M	BUTTON C/F (SG)
12	SB-414243M	BUTTON SELECTER (SG)

Ref. No.	Part No.	Description
14	SP-407906M2	COVER UPPER (SG)
15	ZS-394414J	BT BID30X08STL BZN
16	SE-407905M	LENS-SB (SG)
17	SB-414245M	KNOB TONE (SG)
18	EJ-393745J	TERMINAL W/SCREW JB-0132
19	SZ-407909M	WIRE HOLDER (SG)
20	SZ-407908M	REFLECTOR-SB (SG)

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

FINAL ASSEMBLY (TP-670)



10. FINAL ASSEMBLY (TP-670)

Ref. No.	Part No.	Description
1	SA-407840M	CUSHION FOOT REAR (SG)
2A	SP-414445M	PANEL REAR TP-670 (U) (SG)
2B	SP-414446M	PANEL REAR TP-670 (E) (SG)
2C	SP-414447M	PANEL REAR TP-670 (V) (SG)
3	ZS-394412J	BT BID30X08STL BZN PROJECTION
4	SP-414250M	PANEL FRONT TP-670 (SG)
5	SE-414247M	WINDOW-A (SG)
6	SE-414272M	WINDOW-TP (SG)
7	SZ-414249M	RING FOOT (SG)
8	SA-394136M	CUSHION FOOT (SG)
9	SB-414242M	BUTTON TIMER (SG)
10	SB-414244M	BUTTON C/F (SG)
12	SB-414251J	BUTTON SELECTOR
14	SP-407906M2	COVER UPPER (SG)
15	ZS-394414J	BT BID30X08STL BZN
18	EJ-393745J	TERMINAL W/SCREW UB-0132
19	SZ-407909M	WIRE HOLDER (SG)

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

11. ACCESSARY

Ref. No.	Part No.	Description
1	EE-394420M1	ANT LOOP LA-75
2	EE-396107M	ANT WIRE FM A3063
3	EJ-394417J	SOCKET COAX HXC 0526-01-010

INDEX

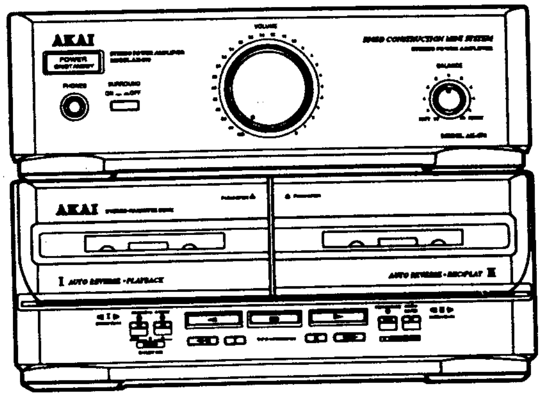
Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
BAA6007T030A	2-1A	ED511907	4-D751	EJ408668J	4-J11B	ET354371	4-TR801
BAA6007T030B	2-1B	ED511907	4-D752	EJ408669J	4-J11A	ET354371	4-TR802
BAA6007T030D	2-1D	ED511907	4-D753	EM408409J	5-IN1	ET354371	4-TR803
BAA6007T030E	2-1E	ED511907	4-D754	EM408409J	6-IN101	ET354371	4-TR804
BAA6007T035A	2-1C	ED511907	4-D757	EM408410J	6-IN102	ET354371	4-TR805
BAA6007T035B	2-1F	ED511907	4-D758	EO352089	3-T204	ET354371	4-TR807
BAA6007T040A	2-2	ED511907	4-D759	EO353588	3-L301	ET354371	4-TR816
BAA6008T050C	2-3A	ED511907	4-D761	EO353588	3-L302	ET354414	6-TR102
BAA6008T050D	2-3B	ED511907	4-D762	EO357539	3-L101	ET354414	6-TR108
EC337603	3-VC201	ED511907	4-D765	EO363279	3-T203	ET354414	7-TR204
EC346868	4-C764	ED511907	4-D766	EO408687J	3-T205	ET354414	7-TR209
EC346868	4-C765	ED511907	4-D767	EO408689M	3-T101	ET354414	8-TR13
EC346868	4-C766	ED511907	4-D811	EO408808M	3-T201	ET354415	8-TR5
EC346868	4-C767	ED511907	4-D812	EO408809M	3-T202	ET354415	8-TR6
EC356284	3-VC202	ED511907	4-D814	EQ403529J1	8-RL1	ET354415	8-TR9
EC410588J	4-C801	ED511907	7-D201	ER318248	7-FR202	ET354415	8-TR10
ED307572	3-D101	ED511907	7-D202	ER318647	3-R425	ET356336	4-TR817
ED307572	3-D203	ED511907	7-D203	ER324184	3-R107	ET356336	6-TR103
ED307572	3-D204	ED511907	7-D204	ER326169	4-R764	ET356336	7-TR203
ED307572	3-D402	ED624903	6-D101	ER331619	7-FR201	ET356437	3-TR101
ED307572	3-D403	ED624903	6-D102	ER333387	3-R108	ET361736	6-TR106
ED307572	3-D404	ED624903	6-D103	ER386215J	4-R751	ET361736	6-TR107
ED307572	4-D801	ED624903	6-D104	ER386215J	4-R752	ET366365	4-TR754
ED307572	4-D802	EE394420M1	11-1	ER386215J	4-R759	ET366365	4-TR756
ED307572	4-D803	EE396107M	11-2	ER408692J	4-R765	ET366581	4-TR758
ED307572	4-D804	EE408686J	3-FE101	ES362883	4-TS801	ET366581	7-TR205
ED307572	4-D805	EH338338	3-FL102B	ES408641J	5-TS1	ET366581	8-TR1
ED307572	4-D807	EH338338	3-FL103B	ES408641J	5-TS2	ET369248	4-TR810
ED307572	4-D808	EH364919	4-IB801	ES408641J	5-TS3	ET373025	4-TR752
ED307572	4-D809	EH394759J	3-FL102A	ES408641J	5-TS4	ET373392	4-TR809
ED307572	4-D813	EH394759J	3-FL103A	ES408641J	5-TS5	ET394735J	3-TR202
ED307572	4-D815	EH405199J	3-FL104	ES408641J	5-TS6	ET394735J	4-TR501
ED307572	4-D822	EH408650J	7-IB201	ES408641J	5-TS7	ET394735J	4-TR502
ED307572	5-D1	EH408650J	7-IB202	ES408641J	5-TS8	ET394735J	4-TR601
ED307572	5-D2	EH408815J	3-FL301	ES408641J	5-TS9	ET394735J	4-TR602
ED307572	5-D3	EH408815J	3-FL302	ES408641J	5-TS10	ET394735J	7-TR201
ED307572	5-D4	EH410605J	3-FL105	ES408641J	6-TS101	ET394735J	7-TR202
ED307572	5-D5	EH410605J	4-FL106	ES408641J	6-TS102	ET396072J	3-TR408
ED307572	5-D6	EI200573	4-IC502	ES408641J	6-TS103	ET397160J	3-TR102
ED307572	5-D10	EI200573	4-IC602	ES408641J	6-TS104	ET397160J	3-TR402
ED307572	6-D105	EI213390	3-IC301	ES408641J	6-TS105	ET397160J	4-TR512
ED307572	6-D106	EI302233	4-IC501	ES408641J	6-TS106	ET397160J	4-TR612
ED307572	6-D107	EI302233	4-IC601	ES408641J	6-TS107	ET397160J	4-TR757
ED307572	6-D108	EI332259	4-IC704	ES408641J	6-TS108	ET397160J	4-TR759
ED307572	6-D110	EI332259	7-IC206	ES408641J	6-TS109	ET397160J	8-TR2
ED307572	6-D111	EI354951	3-IC401	ES408641J	6-TS110	ET397160J	8-TR3
ED307572	8-D2	EI368825M	4-X802	ES408641J	6-TS111	ET397160J	8-TR4
ED307572	8-D3	EI382660J	4-IC701	ES408641J	6-TS112	ET397160J	8-TR7
ED329058	4-D768	EI387938J	4-IC802	ES408641J	6-TS113	ET397160J	8-TR8
ED337990	4-D760	EI400756J	4-IC702	ET337759	3-TR401	ET397160J	8-TR11
ED346531	4-D764	EI400756J	4-IC703	ET349458	3-TR201	ET397160J	8-TR12
ED346534	4-D701	EI400756J	5-IC1	ET353897	3-TR203	ET400965J	7-TR206
ED346534	4-D702	EI400756J	5-IC2	ET353897	4-TR806	ET401091J	4-TR818
ED346559	4-D755	EI400756J	7-IC204	ET353897	4-TR811	ET401091J	4-TR819
ED346560	4-D756	EI405327J	4-X801	ET353899	3-TR406	ET411995J	5-PH1
ED351418	4-D763	EI408645J	6-IC101	ET353899	3-TR407	ET411995J	6-PH101
ED367576	3-D401	EI408646J	7-IC205	ET353899	4-TR753	EV356576	3-VR102
ED370786	3-D405	EI408647J	7-IC201	ET353899	4-TR755	EV356576	3-VR103
ED372893	3-D201	EI408648J	7-IC202	ET353899	4-TR760	EV358829	3-VR101
ED372893	3-D202	EI408648J	7-IC203	ET353899	4-TR761	EV408642J	5-VR1
ED389688J	3-D406	EI408649J	6-X101	ET353899	4-TR815	EV408643J	5-VR2
ED394723J	6-D109	EI408672J	4-IC804	ET353899	5-TR1	EW408676J	4-W1
ED397103J	7-D207	EI408673J	3-IC101	ET353899	7-TR207	EW408679J	4-W2
ED397289J	4-D821	EI408674J	3-X101	ET353899	7-TR208	EW408681J1	4-W3
ED402212J	8-D1	EI408675J4	4-IC801	ET354094	3-TR403	EW408816J2	5-W4
ED403757J	5-D7	EI408814M	3-X401	ET354094	3-TR404	EW408816J2	6-W101
ED403757J	5-D8	EJ359031	3-TM1	ET354094	3-TR405	EW408817J2	5-W2
ED403757J	5-D9	EJ393745J	9-18	ET354364	6-TR105	EW408817J2	5-W3
ED408807J	7-D205	EJ393745J	10-18	ET354370	4-TR808	EW408817J2	6-W102
ED408807J	7-D206	EJ394417J	11-3	ET354370	4-TR812	EW408817J2	6-W103

Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.	Part No.	Ref. No.
SA394136M	9-8						
SA394136M	10-8						
SA407840M	9-1						
SA407840M	10-1						
SB414242M	9-9						
SB414242M	10-9						
SB414243M	9-12						
SB414244M	9-10						
SB414244M	10-10						
SB414245M	9-17						
SB414251J	10-12						
SE407905M	9-16						
SE414247M	9-5						
SE414247M	10-5						
SE414248M	9-6						
SE414272M	10-6						
SP407906M2	9-14						
SP407906M2	10-14						
SP414241M	9-4						
SP414250M	10-4						
SP414443M	9-2A						
SP414444M	9-2C						
SP414445M	10-2A						
SP414446M	10-2B						
SP414447M	10-2C						
SP414449M	9-2B						
SZ407908M	9-20						
SZ407909M	9-19						
SZ407909M	10-19						
SZ414249M	9-7						
SZ414249M	10-7						
ZS394412J	9-3						
ZS394412J	10-3						
ZS394414J	9-15						
ZS394414J	10-15						

ABBREVIATIONS (TUNER)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AFC	Auto Frequency Control	MEMO	MEMOry
AGC	Auto Gain Control	MI-COM	MIcro-COMputer
ALC	Auto Level Control	MIN	MINimum
AM	Amplitude Modulation	MIX	MIXing
AMP	AMPlifier	MPX	Multi pleX
ANT	ANTenna	MW	Medium Wave (frequency)
BATT	BATTery	NC	No Connection
BLK	BLocK	NFB	Negative Feed Back
BUFF	BUFFer	OSC	OSCillator
COMP	COMPalator	PCB	Printed Circuit Board
DET	DETect (DETctor)	PLL	Phase Locked Loop
FLD	FLuorescent Display	Q.D	Quadrature Detector
FM	Frequency Modulation	Rch	Right channel
FREQ	FREQuency	REF	REFerence
GND	GrouND	REG	REGulator
H	Hight	RF	Radio Frequency
HPF	Hight Pass Filter	SEG	SEGment
IF	Intermediate Frequency	SELE	SELEctor
IHF	Institut of High Fidelity	SENS	SENSitivity
IND	INDicator	SIG	SIGnal
I/O	In/Out	S/N	Signal to Noise Ratio
JW	Jumper Wire	SSG	Standard Signal Generator
L	Low	STD	STanDard
LCD	Liquid Crystal Display	SW	SWitch: Short Wave (frequency)
Lch	Left channel	THD	Total Harmonic Distortion
LED	Light Emiting Diode	TP	Test Point
LPF	Low Pass Filter	VCO	Voltage Controlled Cscillator
LW	Long Wave (Frequency)	VR	Variable Resistor
		X'TAL	Crystal

MEMO



MODEL AX-670

STEREO DECK AMPLIFIER

MODEL AX-570/670

SPECIFICATIONS

[AMPLIFIER section]	
Power output	
AX-570	50W+50W (6 ohms, 1kHz, 10% THD, EIAJ), 35W+35W (6 ohms, 1kHz, 1% THD, DIN) 30W+30W (6 ohms, 60Hz to 20kHz, 0.5% THD, FTC)
AX-670	60W+60W (6 ohms, 1kHz, 10% THD, EIAJ), 50W+50W (6 ohms, 1kHz, 1% THD, DIN) 40W+40W (6 ohms, 60 Hz to 20 kHz, 0.5% THD, FTC)
Music power output	TOTAL 350W (AX-570), 430W (AX-670)
Peak music power output	TOTAL 600W (AX-570), 700W (AX-670)
Frequency response	10Hz to 100kHz (10Hz: -4dB, 100kHz: -3dB)
Required speaker impedance	6 to 16 ohms (Front speaker), 8 to 16 ohms (Surround speaker)
Input Sensitivity	
PHONO	3mV/47k ohms
VCR	230mV/22k ohms
Output level	VCR 150mV/1k ohms
S/N ratio	
PHONO	61dB
ETC	75dB
Residual noise	0.3mV
Channel separation	65dB
[Deck section]	
Track system	4 track, 2 channel system
Frequency response	35 to 14,000Hz ± 3dB (Normal tape) 35 to 15,000Hz ± 3dB (CrO_2 tape)
Wow & Flutter	0.09% (WRMS), 0.15% (DIN)
S/N ratio	76dB (Dolby C ON, 1 kHz to 10 kHz) 66dB (Dolby B ON, 5 kHz) 56dB (Dolby OFF, CrO_2 tape)
Total harmonic distortion	less than 0.3% (Normal tape, at 315Hz)
Channel separetion	35dB (Normal tape)
[General]	
Power requirements	AC220V-230V, 50Hz for Europe except UK, AC240V, 50Hz for UK & Australia AC110V/120V/220V/240V, 50/60Hz convertible for other countries
Demensions	270(W) x 200(H) x 313(D)mm
Weight	7.0kg
Power consumption	110W (AX-570), 140W (AX-670)

Standard accessories

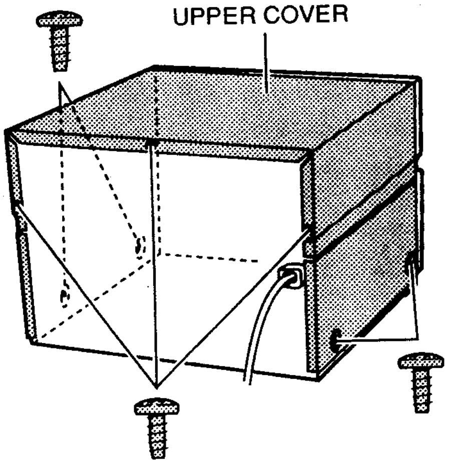
Remote control unit	x 1
Batteries	x 2
Operator's manual	x 1

*For improvement purposes, specifications and design are subject to change without notice.
*Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
*"DOLBY" and DD symbol are trademarks of Dolby Licensing Corporation.

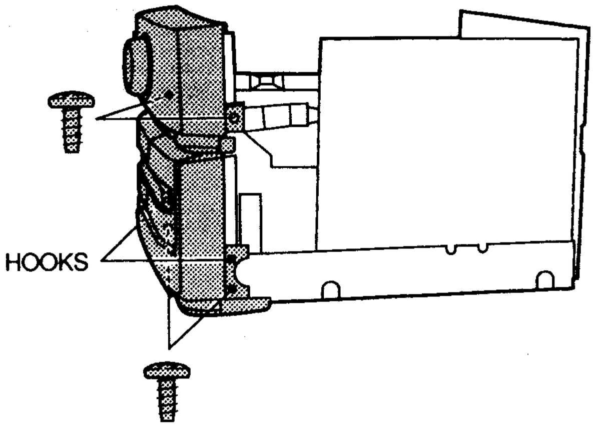
I. DISASSEMBLY

In case of trouble etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

1. Removal of the UPPER COVER

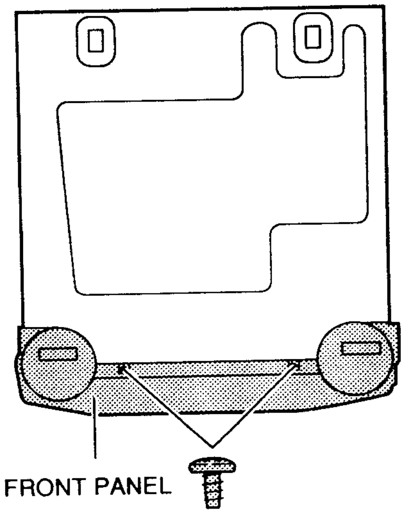

UPPER COVER

3.

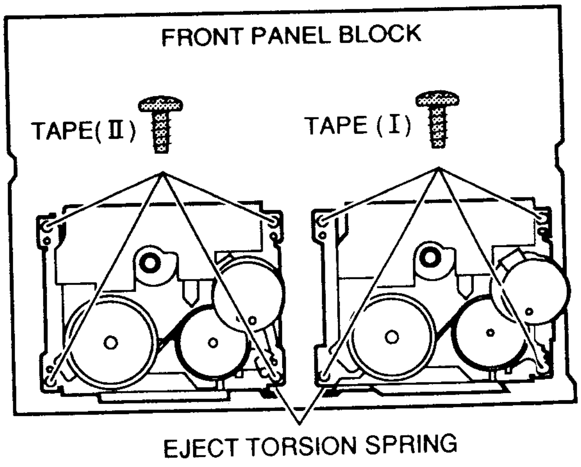


1) Disconnect the wires from J4 and J8 connectors on the POWER SUPPLY PCB, P101,P102,J651,J652,J801 and J802 on the DECK PCB, J2 on the MAIN AMP PCB.

2. Removal of the FRONT PANEL BLOCK

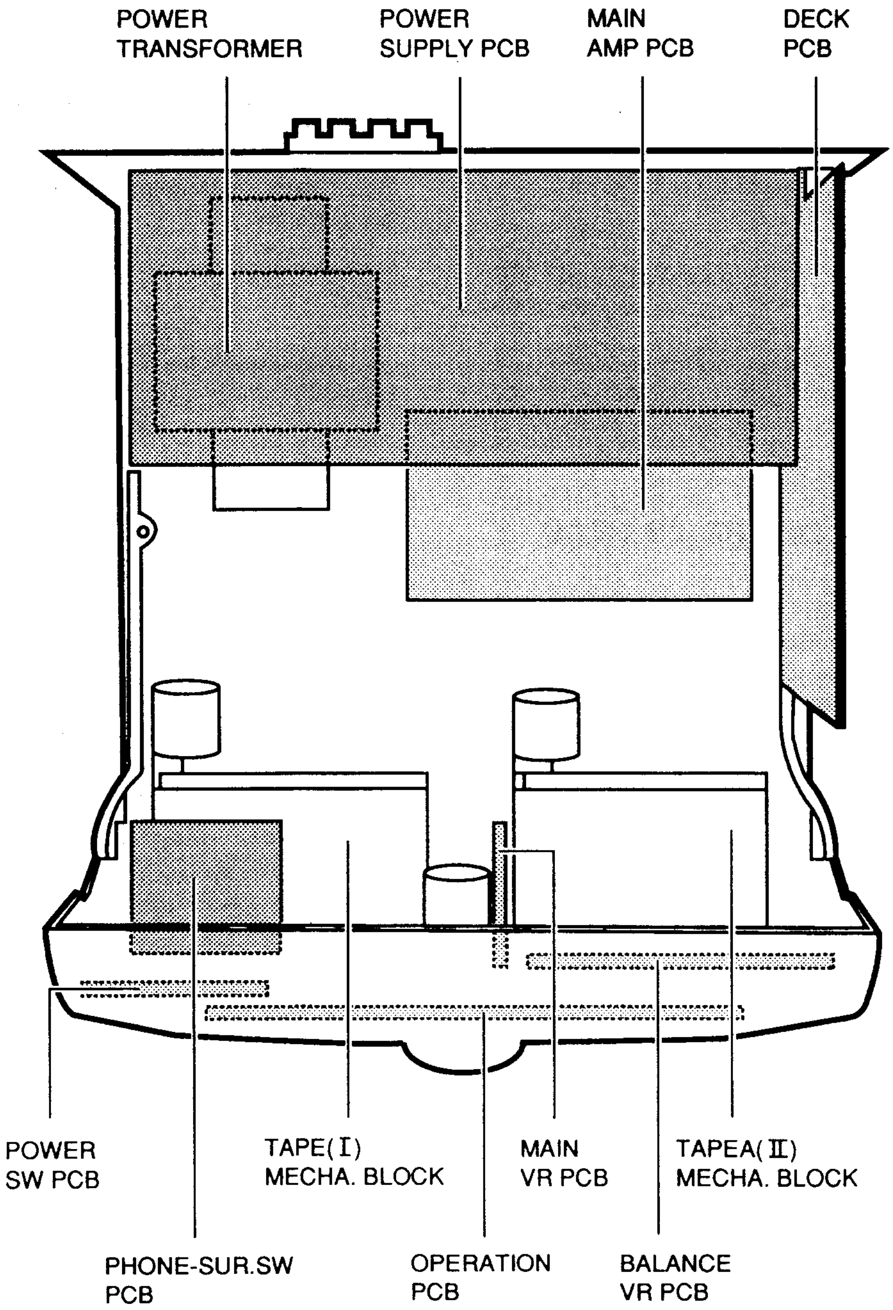

FRONT PANEL

4. Removal of the CASSETTE MECHA. BLOCK


FRONT PANEL BLOCK
TAPE(II)
TAPE (I)
EJECT TORSION SPRING

1) Unhook the EJECT TORSION SPRING.
2) Remove the four MECHA. BLOCK RETAINING SCREWS.

II. PRINCIPAL PARTS LOCATION



POWER TRANSFORMER
POWER SUPPLY PCB
MAIN AMP PCB
DECK PCB
POWER SW PCB
TAPE(I) MECHA. BLOCK
MAIN VR PCB
TAPEA(II) MECHA. BLOCK
PHONE-SUR.SW PCB
OPERATION PCB
BALANCE VR PCB

Fig. 2-1 Top view

III. REPLACEMENT OF PRINCIPAL MECHANICAL PARTS

3-1. REPLACEMENT OF THE PINCH ROLLER BLOCK

1) Pull the PINCH ROLLER BLOCK upward (⬆) while releasing the PINCH ROLLER RETAINING HOOK
2) Reassemble in the reverse order.

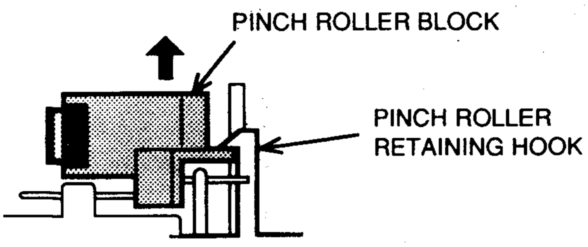

PINCH ROLLER BLOCK
PINCH ROLLER RETAINING HOOK

Fig. 3-1

3-2. REPLACEMENT OF THE PB HEAD (TAPE I)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all the lead wires with a soldering iron, then replace the PB HEAD.
3) Reassemble, in the reverse order. After replacement, head azimuth and PB level (AX-670 only) adjustment must be performed.

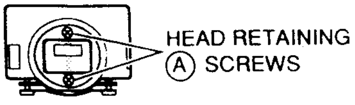

HEAD RETAINING
Ⓐ SCREWS

Fig. 3-2

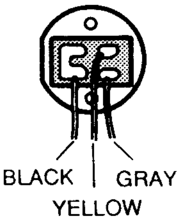

BLACK
GRAY
YELLOW

Fig. 3-3

3-3. REPLACEMENT OF THE REC/PB HEAD (TAPE II)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all lead wires with a soldering iron, then replace the REC/PB HEAD.
3) Reassemble in the reverse order. After replacement, head azimuth, PB level (AX-670 only), BIAS current (AX-670 only) and REC level (AX-670 only) adjustments must be performed.

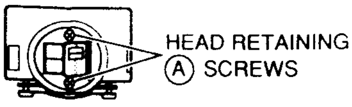

HEAD RETAINING
Ⓐ SCREWS

Fig. 3-4

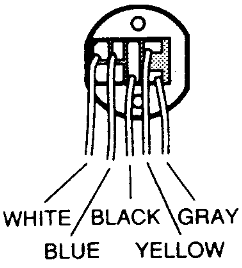

WHITE
BLACK
GRAY
BLUE
YELLOW

Fig. 3-5

3-4. REPLACEMENT OF THE CAPSTAN MOTOR

1) Disconnect the lead wire of the CAPSTAN MOTOR with a soldering iron.
2) Remove the CAPSTAN MOTOR RETAINING Ⓑ SCREWS, then replace the CAPSTAN MOTOR.
3) Reassemble in the reverse order and set the DRIVE BELT. After replacement, tape speed adjustment must be performed.

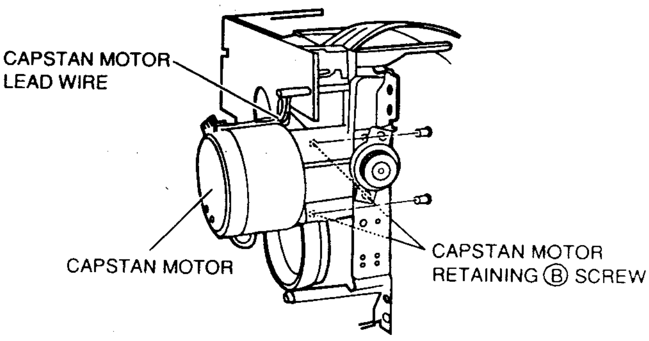

CAPSTAN MOTOR LEAD WIRE
CAPSTAN MOTOR
CAPSTAN MOTOR RETAINING Ⓑ SCREW

Fig. 3-6

3-5. REPLACEMENT OF THE DRIVE BELT

1) Remove the CAPSTAN MOTOR RETAINING Ⓑ SCREWS. (refer illustration Fig. 3-6)
2) Unsolder the lead wires of the SOLENOID with a soldering iron.
3) Remove the two MOTOR PCB RETAINING Ⓒ SCREWS and separate the MOTOR PCB from the MECHA BLK. Replace the DRIVE BELT.
4) Reassemble in the reverse order. After replacement, confirm the tape speed and if the result is not satisfactory, adjust the tape speed.

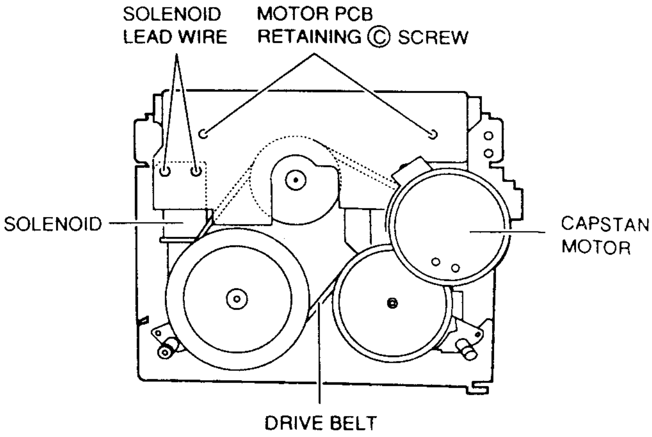

SOLENOID LEAD WIRE
MOTOR PCB RETAINING Ⓒ SCREW
SOLENOID
CAPSTAN MOTOR
DRIVE BELT

Fig. 3-7

IV. MECHANICAL ADJUSTMENT

4-1. ADJUSTMENT OF THE PB HEAD AZIMUTH ALIGNMENT (TAPE I)

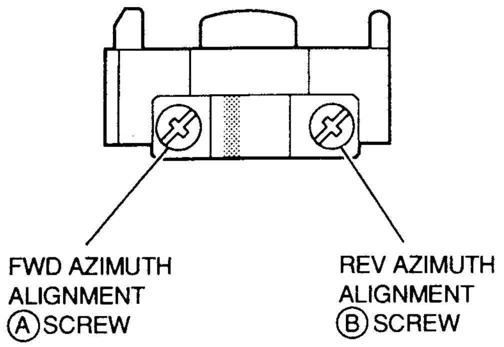


Fig. 4-1

1) Connect an AC milli-voltmeter to the TEST POINT 1L and 1R (refer to the illustration on page 26) and connect an oscilloscope's input CH-1 and CH-2 to the output of the AC milli-voltmeters.
2) Play back the 10 kHz (-15 dB), HEAD AZIMUTH ALIGNMENT TEST TAPE (TF-106CH) then adjust the PB HEAD AZIMUTH ALIGNMENT Ⓐ (FWD PLAY) and Ⓑ (REV PLAY) SCREW respectively so that the reading on the AC mill-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase, in both FWD and REV directions.

4-2. ADJUSTMENT OF THE REC/PB HEAD AZIMUTH ALIGNMENT (TAPE II)

1) Connect an AC milli-voltmeter to the TEST POINT 1L and 1R (refer to the illustration on page 26) and connect the oscilloscope's input CH-1 and CH-2 to the output of the AC milli-voltmeters.
2) Play back the 10 kHz (-15dB), HEAD AZIMUTH ALIGNMENT TEST TAPE (TF-106CH) then adjust the REC/PB HEAD AZIMUTH ALIGNMENT Ⓐ (FWD PLAY) and Ⓑ (REV PLAY) SCREW respectively so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase in both FWD and REV directions.

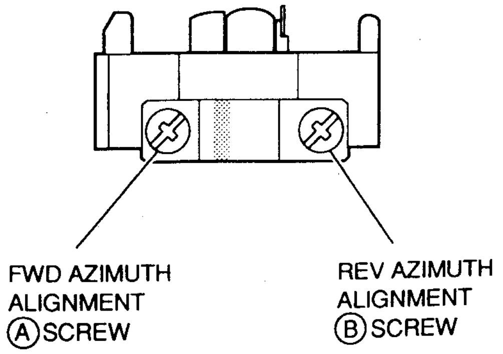


Fig. 4-2

V. ELECTRICAL ADJUSTMENT

NOTE:

1) Tepe speed (x2) adjustment should be performed in the test mode. To engage the test mode, connect the AC power cord to the AC outlet while pressing the ▶▶ and ◀◀ buttons together. When the test mode is engaged, X1 dub lamp is lit. To disengage the test mode, unplug the AC power cord from the AC outlet.
2) When performing the tape speed adjustment, observe the following notes.
   - Adjustment should be started more than 30 seconds after the power is ON.
   - Adjustment should be made on x2 speed mode first then adjust normal speed mode.
   - Adjustment should be made in the forward direction.
3) An AC milli-volt meter input should be terminated with 22k ohms register in parallel.
4) Set the DOLBY NR switch to "OFF" position during adjustment.
5) Use the maxell UDI C-60 tape for the adjustments "step 8 & 9".
6) Before adjustment, clean and de-magnetize the heads.

STEP | ADJUSTMENT

1. TEST TAPE/INPUT SIGNAL
2. MODE
3. CHECK POINT, ADJUSTMENT PART
4. REMARKs (•) and RESULT (∗)

⟶ Adjustment Part

- - → Test Point

1 TAPE I (X2) TAPE SPEED

1. 3,150Hz test tape (TF-110CT)
2. PLAY (test mode)
3. TEST POINT 1L, VR651
4.
   - Connect a frequency counter to the TEST POINT 1L.
   - Press the "x2 DUBBING START" button during playback.

∗ 6,300 ± 10 Hz

3 TAPE I NORMAL TAPE SPEED

1. 3,150Hz test tape (TF-110CT)
2. PLAY
3. TEST POINT 1L, VR653
4.
   - Connect a frequency counter to the TEST POINT 1L.

∗3,150 ± 5Hz

2 TAPE II (X2) TAPE SPEED

1. 3,150Hz test tape (TF-110CT)
2. PLAY (test mode)
3. TEST POINT 1L, VR654
4.
   - Connect a frequency counter to the TEST POINT 1L.
   - Press the "x2 DUBBING START" button during playback.

∗ 6,280 ± 10Hz

4 TAPE II NORMAL TAPE SPEED

1. 3,150Hz test tape (TF-110CT)
2. PLAY
3. TEST POINT 1L, VR652
4.
   - Connect a frequency counter to the TEST POINT 1L.

∗ 3,140 ± 5Hz

6 TAPEII PB LEVEL (AX-670 ONLY)

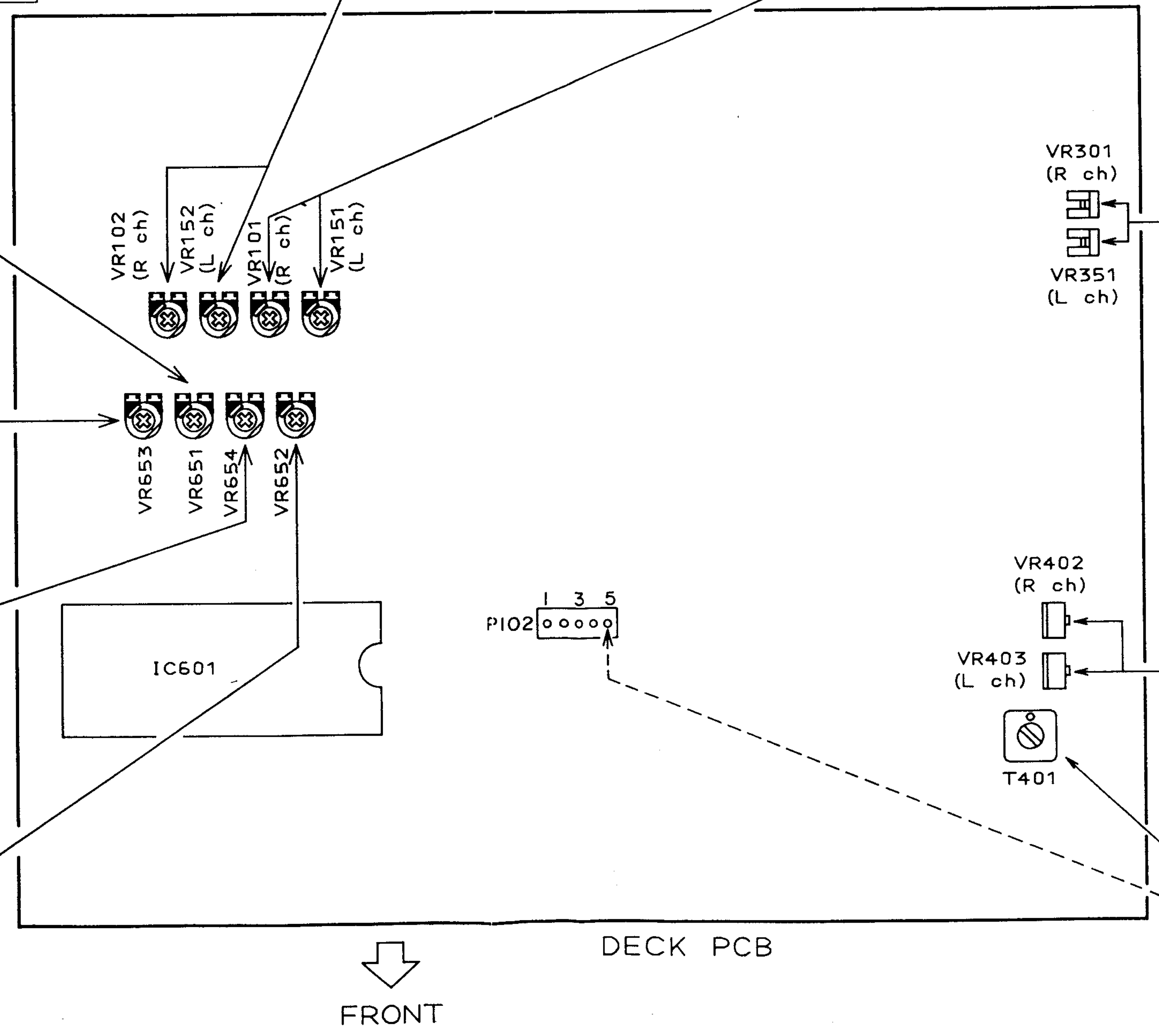
1. 315Hz test tape (TF-101CL)
2. PLAY
3. TEST POINT 1L & 1R, VR152 (L-ch) / VR102 (R-ch)
4.
   - Connect an AC milli-voltmeter to the TEST POINT 1L & 1R.

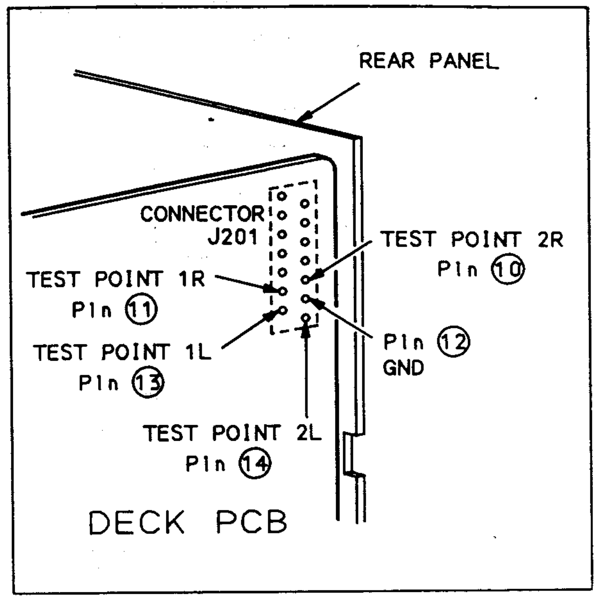
∗ -6.0dBs

5 TAPE I PB LEVEL (AX-670 ONLY)

1. 315Hz test tape (TF-101CL)
2. PLAY
3. TEST POINT 1L & 1R, VR151 (L-ch) / VR101 (Rch)
4.
   - Connect an AC milli-voltmeter to the TEST POINT 1L & 1R.

∗ -6.0dBs





9 RECORDING LEVEL (AX-670 ONLY)

1. 1 kHz, -6.0 dBs (LINE OUT), NORMAL recording tape.
2. REC → PLAY
3. TEST POINT 1L & 1R, VR351 (L-ch) / VR301 (R-ch)
4.
   - Connect an AC Milli-voltmeter to the TEST POINT 1L & 1R.
   - Connect an audio signal generator to the TEST POINT 2L & 2R and set the generator level so that the TEST POINT 1L & 1R levels are -6.0dBs.

∗ Playback levels after recording are -6.0dBs

8 NORMAL POSITION BIAS (AX-670 ONLY)

1. 1 kHz and 10 kHz, -26.0 dBs (LINE OUT), NORMAL recording tape.
2. REC → PLAY
3. TEST POINT 1L & 1R, VR403 (L-ch) / VR402 (R-ch)
4.
   - Connect an AC Milli-voltmeter to the TEST POINT 1L & 1R.
   - Connect an audio signal generator to the TEST POINT 2L & 2R and set the generator level so that the TEST POINT 1L & 1R levels are -26.0dBs.

∗ Playback level difference between 1kHz and 10kHz after recording is within ± 0.3dB.

7 BIAS OSC FREQUENCY

1. CrO_2 type blank tape
2. REC
3. TAPE II, T401 (P102)
4.
   - Connect a frequency counter between P102 ⑤ pin and GND. (10 : 1 probe should be used to avoid affecting to the measurement.)

∗ 100.0 ± 0.2kHz

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to the list Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A)	[S] :SAA (Australia)
[B] :BEAB (England)	[U] :U/T (Universal Area)
[C] :CSA (Canada)	
[E] :CEE (Europe)	[V] :VDE (Germany)
[J] :JPN (Japan)	[Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

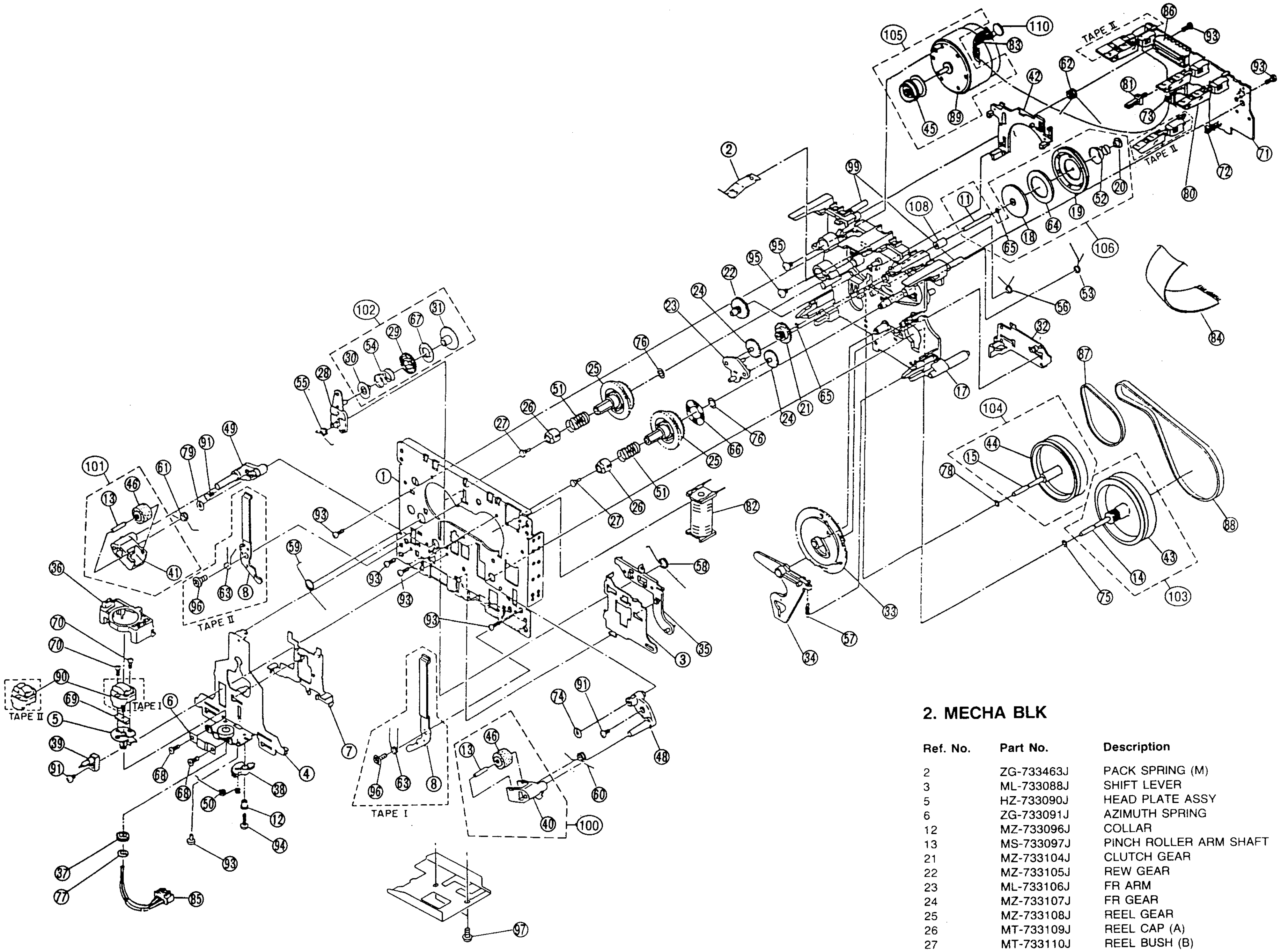
⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AX-411759M	REMOCON RC-S670
2	BB-414756M1	MECHA GAK9311 [TAPE 1]
3	BB-414757M1	MECHA GAK9611 [TAPE 2]
4	BM-729993J	MOTOR EG-530YD-2B
5	*BT-408729M	TRANS POW C1029 BS [570]
6	*BT-408728M	TRANS POW C1029 EV [E] [570]
7	*BT-408727M	TRANS POW C1029 U [570]
8	*BT-408732M	TRANS POW C1030 BS [670]
9	*BT-408731M	TRANS POW C1030 EV [E] [670]
10	*BT-408730M	TRANS POW C1030 U [670]
11	*BT-416526M	TRANS POW C1032 EV [V] [570]
12	*BT-416525M	TRANS POW C1033 EV [V] [670]
13	ED-394509J	D LED GL3HY43 ORANGE
14	ED-389638J	D LED GL3HY47 YELLOW
15	ED-394724J	D LED GL3PR43 RED
16	ED-307572	D SILICON H 1SS131
17	*ED-394708J	D SILICON RBA402 200/4.0A
18	*ED-511907	D SILICON 1N4002 100/1.0A
19	*ED-408743J	D ZENER H HZS11B3L
20	ED-388320J	D ZENER H HZS12B3L
21	*ED-391003J	D ZENER H HZS4C3
22	ED-400171J	D ZENER H HZS6C2L
23	*EF-359007	FUSE BET T 250V 1.25A [U,B,S] [570]
24	*EF-364518	FUSE BET T 250V 2.50A [570]
25	*EF-359225	FUSE BET T 250V 3.15A [670]
26	*EF-359086	FUSE BET T 250V 4.00A [670]
27	*EF-358974	FUSE BET T 250V 630MA
28	*EF-601964	FUSE SEMKO T 250V 1.60A [U,B,S] [670]
29	EH-408820J	COMP R RGLE10T 472J
30	EI-389322J	IC CXA1101P [570]
31	EI-394573J	IC CXA1331S [670]
32	EI-387938J	IC HD74LS05P
33	EI-394574J	IC LA2000
34	EI-393323J	IC M5218AL-771
35	*EI-394709J	IC STK4142-2 [570]
36	*EI-358554	IC STK4152II [670]
37	EI-310036	IC TC4066BP
38	EI-408700J2	IC UPD75108CW-W25 MXA1DK3
39	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
40	EO-403613J	COIL FIX 2 202AK-018A 2R2K
41	EO-356809	COIL TUN 1 100Z-121 100.00KHZ
42	EP-733165J	SOLENOID ASSY
43	*ER-332225	R FUSE H S10 ERD2FC 1/4W 56R0G
44	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
45	*ER-401042J	R FUSE V T05 ERD2FCV 1/4W33R0G
46	ER-397193J	R OMF V T05 FS 1W 100J
47	ER-397194J	R OMF V T05 FS 1W 331J
48	ES-733164J	LEAF SWITCH LSA-1114G
49	ES-408695J	SW PUSH SPUL12 2-02-02N [SURROUND SW]
50	*ES-349070	SW SELECTOR YKS11-0002 02-4 [SW901]
51	ES-408706J	SW SLIDE SSSS91 L=2 1-01-02N [570]
52	ES-408708J	SW SLIDE SSSS91 L=2 1-01-03 [670]
53	ES-408703J	SW TACT EVQ 233 05R T05 [POWER SW]
54	ES-733468J	SWITCH LEAF LSA-1141E1AU
55	ET-733156J	DETECTOR NJL5165K
56	ET-369248	TR DTA114YS
57	ET-375983	TR DTA124TS
58	ET-373382	TR DTA143ZS
59	ET-373985	TR DTA144TS
60	ET-354365	TR DTC114YS
61	ET-373485	TR DTC123JS
62	ET-375986	TR DTC124TS
63	ET-354364	TR DTC143TS
64	ET-373391	TR DTC143ZS
65	ET-354414	TR DTC144ES
66	ET-370310	TR DTC144TS
67	ET-408777J	TR FET 2SJ40 D,E T05
68	ET-408709J	TR FET 2SK373 Y,GR T05
69	ET-371688	TR FET 2SK381 D F05
70	ET-353899	TR 2SA1317 S,T,U
71	ET-408772J	TR 2SA1318 S,T,U T05
72	*ET-352726	TR 2SA1392 T,U
73	ET-397160J	TR 2SC3330 R,S,T,U,V
74	ET-361736	TR 2SC3576
75	ET-400741J	TR 2SC3708 T T05
76	*ET-366581	TR 2SD1762 E,F
77	*ET-373025	TR 2SD1944 J1,J2,K
78	ET-396072J	TR 2SD2159 V,W
79	EV-394561J	R S-FIX H V8K4-11 (1S) 0.10W102
80	EV-355380	R S-FIX H V8K4-11 (1S) 0.10W202
81	EV-404323J	R S-FIX H V8K4-11 (1S) 0.10W332 [670]
82	EV-341251	R S-FIX V TM8KH1-1S 0.50W104 [670]
83	EV-403967J	R S-FIX V T05EVNDCAA03 0.1W332 [670]
84	EV-408707J	VR ROTARY RK11K1140 SP W104 [BALANCE VR]
85	EV-408811J	VR SPL EUW M06 022B15 B104X2 [MAIN VR]
86	EW-733473J	3P HEAD WIRE ASSY [GAK9311]
87	EW-733169J	5P HEAD WIRE ASSY [GAK9611]
88	HP-733172J	ROTATION HEAD MK10P-AB2N3 [GAK9311]
89	HR-733173J	ROTATION HEAD YK56R-AA4N3 [GAK9611]
90	HZ-733119J	TAPE GUIDE
91	MB-733469J	BELT DRIVE (B)
92	MB-733470J	BELT DRIVE (C)
93	MR-733129J	P ROLLER
94	MZ-733132J	HOUSING ASSY (L)
95	MZ-733131J	HOUSING ASSY (R)

MECHA BLK


105
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TAPE II
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TAPE II
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TAPE I
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TAPE II
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100
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TAPE I
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97

2. MECHA BLK

Ref. No.	Part No.	Description
2	ZG-733463J	PACK SPRING (M)
3	ML-733088J	SHIFT LEVER
5	HZ-733090J	HEAD PLATE ASSY
6	ZG-733091J	AZIMUTH SPRING
12	MZ-733096J	COLLAR
13	MS-733097J	PINCH ROLLER ARM SHAFT
21	MZ-733104J	CLUTCH GEAR
22	MZ-733105J	REW GEAR
23	ML-733106J	FR ARM
24	MZ-733107J	FR GEAR
25	MZ-733108J	REEL GEAR
26	MT-733109J	REEL CAP (A)
27	MT-733110J	REEL BUSH (B)
28	ML-733111J	PLAY ARM
32	ML-733115J	SHIFT LEVER SELECT
33	MZ-733116J	PLAY CAM GEAR
34	ML-733117J	TRIGGER ARM
35	ML-733118J	SELECT ARM
36	HZ-733119J	TAPE GUIDE
37	MZ-733120J	ROTATION GEAR
38	MZ-733121J	RETURN GEAR
39	MS-733122J	CASSETTE GUIDE
40	ML-733123J	P ROLLER ARM (R)
41	ML-733124J	P ROLLER ARM (L)
42	ML-733125J	BRAKE ARM
45	MR-733466J	PULLEY MOTOR (YD)
46	MR-733129J	P ROLLER
48	MZ-733131J	HOUSING ASSY (R)
49	MZ-733132J	HOUSING ASSY (L)
50	ZG-733133J	RETURN SPRING
51	ZG-733134J	REEL SPRING
53	ZG-733136J	CLUTCH ARM SPRING
55	ZG-733138J	PLAY ARM SPRING
56	ZG-733139J	SHIFT LEVER SELECT SPRING
57	ZG-733140J	TRIGGEER ARM SPRING
58	ZG-733141J	SHIFT SPRING
59	ZG-733142J	HEAD CHASSIS SPRING
60	ZG-733143J	P ROLLER ARM (R) SPRING
61	ZG-733144J	P ROLLER ARM (L) SPRING
62	ZG-733145J	BRAKE ARM SPRING
63A	ZG-733146J	INTER LOCK LEVER (R) SPRING [GAK9311]
63B	ZG-733147J	INTER LOCK LEVER (L) SPRING [GAK9611]
65	ZW-733149J	POLYSLIDER WASHER 1.6X3X0.13T
66	SZ-733150J	REFLECT SEAL
68	ZS-733467J	SCREW AZIMUTH
70	ZG-733154J	HEAD SCREW (RVS)
72	ET-733156J	DETECTOR NJL5165K
73	ER-341091	R CB H F05 RDS 1/6W 152J
74	ZW-733157J	POLYSLIDER WASHER 1.8X6X0.5T
75	ZW-733158J	POLYSLIDER WASHER 2.3X4X0.25T
76	ZW-733159J	TEFRON WASHER 4.1X6.5X0.25T
77	ZW-733160J	POLYSLIDER WASHER 3.5X6.5X0.5T
78	ZW-733161J	POLYSLIDER WASHER 2.1X4X0.25T
79	ZW-733162J	POLYSLIDER WASHER 1.65X5X0.5T
80	ES-733468J	SWITCH LEAF LSA-1141E1AU
81	ES-733164J	LEAF SWITCH LSA-1114G
82	EP-733165J	SOLENOID ASSY
84	EW-733167J	15P FLAT RIBBON WIRE
85A	EW-733473J	3P HEAD WIRE ASSY [GAK9311]
85B	EW-733169J	5P HEAD WIRE ASSY [GAK9611]
86	EJ-733170J	CONNECTOR 52004-1510
87	MB-733469J	BELT DRIVE (B)
88	MB-733470J	BELT DRIVE (C)
89	BM-729993J	MOTOR EG-530YD-2B
90A	HP-733172J	ROTATION HEAD MK10P-AB2N3 [GAK9311]
90B	HR-733173J	ROTATION HEAD YK56R-AA4N3 [GAK9611]
91	ZS-460440	PAN20X04STL CMT
93	ZS-321320	BT PAN20X06STL CMT
94	ZS-733474J	SCREW TAP TITE 17X08
95	ZS-432843	PAN26X04STL CMT
96	ZS-733471J	SCREW WASHER HEAD 20X10
97	ZS-357727	ST PAN20X05STL CMT
99	MA-733472J	BASE MECHA ASSY
102	BZ-733179J	PLAY GEAR ASSY
103	BF-733191J	FLYWHEEL (R) ASSY
104	BF-733192J	FLYWHEEL (L) ASSY
106	BZ-733194J	CLUTCH ASSY
110	EC-322028	C CE V F05 SL 101J 50DC

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

3. P.C BOARD BLK

Ref. No.	Part No.	Description
1A	BA-C1029T050A	ML PC (#) MAIN-AXBLK AX-550 (U)/ML [U]
1B	BA-C1029T050B	ML PC (#) MAIN-AXBLK AX-550 (E)/ML [E]
1C	BA-C1029T050C	ML PC (#) MAIN-AXBLK AX-550 (V)/ML [V]
1D	BA-C1029T050D	ML PC (#) MAIN-AXBLK AX-550 (B)/ML [B,S]
1E	BA-C1029T050E	ML PC (#) MAIN-AXBLK AX-650 (U)/ML [U]
1F	BA-C1029T050F	ML PC (#) MAIN-AXBLK AX-650 (E)/ML [E]
1G	BA-C1029T050G	ML PC (#) MAIN-AXBLK AX-650 (V)/ML [V]
1H	BA-C1029T050H	ML PC (#) MAIN-AXBLK AX-650 (B)/ML [B,S]
2A	BA-C1029T060D	ML PC (#) DECK-AXBLK AX-570/ML
2B	BA-C1029T060E	ML PC (#) DECK-AXBLK AX-670/ML

PC (#) MAIN-AX BLK CONSISTS OF FOLLOWING P.C BOARDS.

- MAIN AMP P.C BOARD
- POWER SUPPLY P.C BOARD
- BALANCE VR P.C BOARD
- MAIN VR P.C BOARD
- PHONE/USR SW P.C BOARD
- POWER SW P.C BOARD
- LED P.C BOARD

PC (#) DECK-AX BLK CONSISTS OF FOLLOWING P.C BOARDS.

- DECK P.C BOARD
- OPERATION P.C BOARD

4. MAIN AMP P.C BOARD

Ref. No.	Part No.	Description
C83A	EC-383075J	C EC V CUT SME 332M 35.0DC [570]
C83B	EC-394535J	C EC V CUT SME 332M 45.0DC [670]
C84A	EC-383075J	C EC V CUT SME 332M 35.0DC [570]
C84B	EC-394535J	C EC V CUT SME 332M 45.0DC [670]
D1	*ED-394708J	D SILICON RBA402 200/4.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	ED-307572	D SILICON H 1SS131
D5	ED-388320J	D ZENER H HZS12B3L
D6	ED-307572	D SILICON H 1SS131
D7	ED-388320J	D ZENER H HZS12B3L
D8	ED-511907	D SILICON 1N4002 100/1.0A
FR1	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
FR2	*ER-332225	R FUSE H S10 ERD2FC 1/4W 56R0G
IC1A	*EI-394709J	IC STK4142-2 [570]
IC1B	*EI-358554	IC STK4152II [670]
L1	EO-403613J	COIL FIX 2 202AK-018A 2R2K
L2	EO-403613J	COIL FIX 2 202AK-018A 2R2K
R9	ER-397193J	R OMF V T05 FS 1W 100J
R10	ER-397193J	R OMF V T05 FS 1W 100J
R59	ER-397193J	R OMF V T05 FS 1W 100J
R60	ER-397193J	R OMF V T05 FS 1W 100J
TR1	ET-354365	TR DTC114YS
TR2	ET-375983	TR DTA124TS
F201A	*EF-364518	FUSE BET T 250V 2.50A [570]
F201B	*EF-359225	FUSE BET T 250V 3.15A [670]
F202A	*EF-364518	FUSE BET T 250V 2.50A [570]
F202B	*EF-359225	FUSE BET T 250V 3.15A [670]
F203A	*EF-359225	FUSE BET T 250V 3.15A [570]
F203B	*EF-359086	FUSE BET T 250V 4.00A [670]
F204A	*EF-359225	FUSE BET T 250V 3.15A [570]
F204B	*EF-359086	FUSE BET T 250V 4.00A [670]

5. POWER SUPPLY P.C BOARD

Ref. No.	Part No.	Description
C201	EC-363491	C EC V CUT SME 222M 25.0DC
C203	EC-363491	C EC V CUT SME 222M 25.0DC
C251	*EC-389414J	C CE V DE7090 B102K 400AC
D201	*ED-511907	D SILICON 1N4002 100/1.0A
D202	*ED-511907	D SILICON 1N4002 100/1.0A
D203	*ED-511907	D SILICON 1N4002 100/1.0A
D204	*ED-511907	D SILICON 1N4002 100/1.0A
D205	*ED-511907	D SILICON 1N4002 100/1.0A
D206	*ED-511907	D SILICON 1N4002 100/1.0A
D207	ED-388320J	D ZENER H HZS12B3L
D208	ED-388320J	D ZENER H HZS12B3L
D209	ED-388320J	D ZENER H HZS12B3L
D210	ED-400171J	D ZENER H HZS6C2L
D211	ED-400171J	D ZENER H HZS6C2L
D214	ED-307572	D SILICON H 1SS131
D215	*ED-511907	D SILICON 1N4002 100/1.0A
D216	*ED-511907	D SILICON 1N4002 100/1.0A
FR208	*ER-401042J	R FUSE V T05 ERD2FCV 1/4W33R0G
J6	EJ-408717J	SOCKET CFG1115-0121 RED 15P
L203	*EO-338409	COIL LF FKOB160MH02 250UH
TM201	EJ-408698J	TERMINAL PUSH LQR0810-0006 8P [SP TERMINAL]
TR201	ET-371688	TR FET 2SK381 D F05
TR202	*ET-366581	TR 2SD1762 E,F
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR204	*ET-373025	TR 2SD1944 J1,J2,K
TR205	ET-397160J	TR 2SC3330 R,S,T,U,V
TR206	*ET-352726	TR 2SA1392 T,U
TR207	ET-353899	TR 2SA1317 S,T,U
TR208	*ET-366581	TR 2SD1762 E,F
TR209	ET-397160J	TR 2SC3330 R,S,T,U,V
TR210	ET-354365	TR DTC114YS
TR211	*ET-366581	TR 2SD1762 E,F
F1A	*EF-359007	FUSE BET T 250V 1.25A [U,B,S] [570]
F1B	*EF-601964	FUSE SEMKO T 250V 1.60A [U,B,S] [670]
F2A	*EF-359007	FUSE BET T 250V 1.25A [U] [570]
F2B	*EF-601964	FUSE SEMKO T 250V 1.60A [U] [670]
F101	*EF-601964	FUSE SEMKO T 250V 1.60A
F102	*EF-601964	FUSE SEMKO T 250V 1.60A
F103	*EF-358974	FUSE BET T 250V 630MA
F104	*EF-358974	FUSE BET T 250V 630MA

6. BALANCE VR P.C BOARD

Ref. No.	Part No.	Description
TR301	ET-354365	TR DTC114YS
TR302	ET-353899	TR 2SA1317 S,T,U
TR303	ET-353899	TR 2SA1317 S,T,U
TR304	ET-397160J	TR 2SC3330 R,S,T,U,V
TR305	ET-397160J	TR 2SC3330 R,S,T,U,V
VR301	EV-408707J	VR ROTARY RK11K1140 SP W104 [BALANCE VR]

7. MAIN VR P.C BOARD

Ref. No.	Part No.	Description
VR401	EV-408811J	VR SPL EUW M06 022B15 B104X2 [MAIN VR]

8. PHONE/SUR SW P.C BOARD

Ref. No.	Part No.	Description
J501	EJ-394455J	PHONE J 3P YKB21-5006 6.3
R501	ER-397194J	R OMF V T05 FS 1W 331J
R502	ER-397194J	R OMF V T05 FS 1W 331J
SW501	ES-408695J	SW PUSH SPUL12 2-02-02N [SURROUND SW]

9. POWER SW P.C BOARD

Ref. No.	Part No.	Description
TS601	ES-408703J	SW TACT EVQ 233 05R T05 [POWER SW]

10. LED P.C BOARD

Ref. No.	Part No.	Description
D701	ED-394509J	D LED GL3HY43 ORANGE

11. DECK P.C BOARD

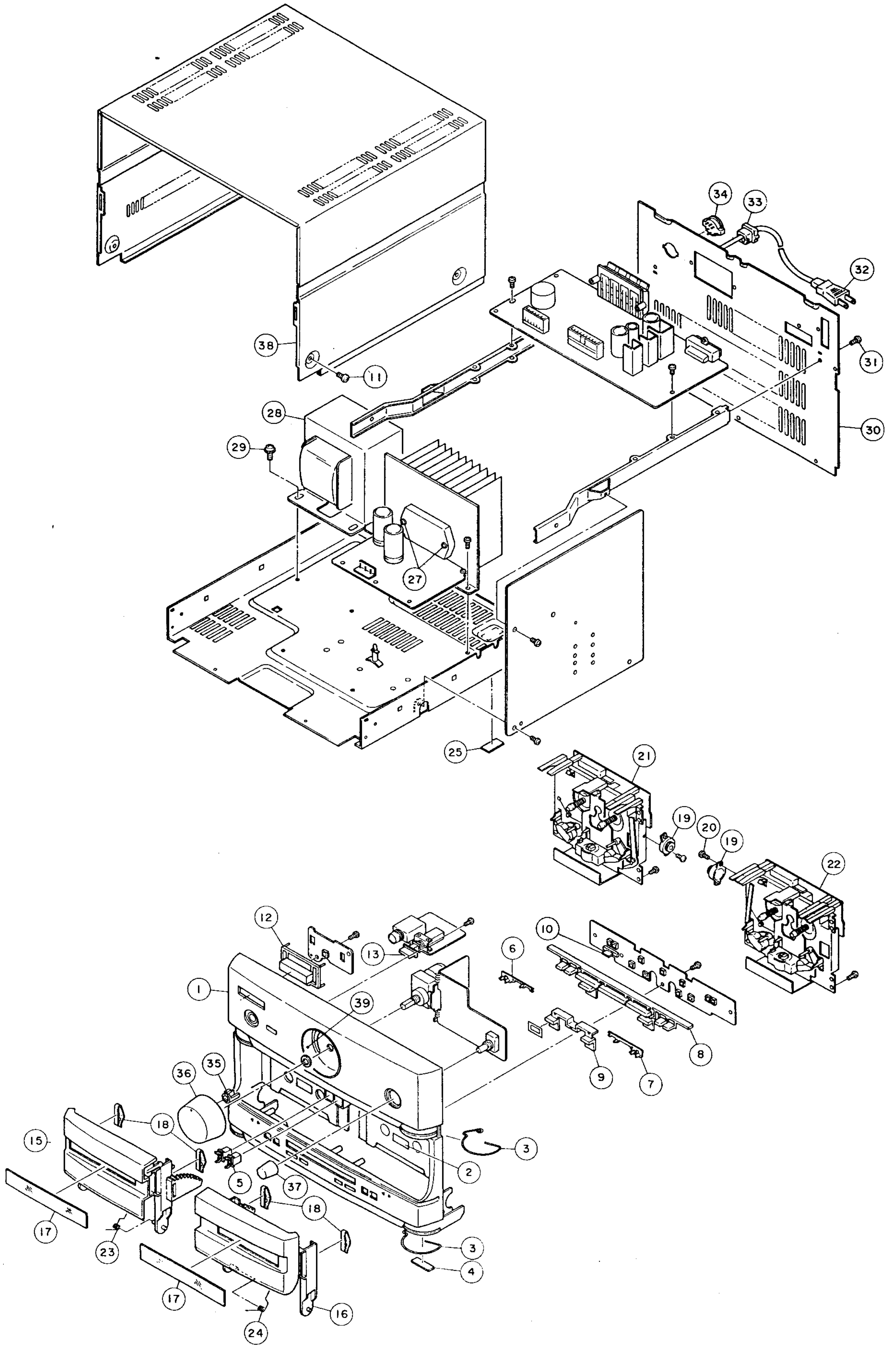
Ref. No.	Part No.	Description
D101	ED-307572	D SILICON H 1SS131
D151	ED-307572	D SILICON H 1SS131
D301	ED-307572	D SILICON H 1SS131
D351	ED-307572	D SILICON H 1SS131
D401	*ED-391003J	D ZENER H HZS4C3
D501	ED-307572	D SILICON H 1SS131
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D504	ED-307572	D SILICON H 1SS131
D505	ED-307572	D SILICON H 1SS131
D601	ED-307572	D SILICON H 1SS131
D602	*ED-408743J	D ZENER H HZS11B3L
D651	ED-307572	D SILICON H 1SS131
D652	ED-307572	D SILICON H 1SS131
D725	ED-511907	D SILICON 1N4002 100/1.0A
D726	ED-511907	D SILICON 1N4002 100/1.0A
D761	ED-307572	D SILICON H 1SS131
D762	ED-307572	D SILICON H 1SS131
D763	ED-624903	D SILICON H 1S2473
FL101	EO-356809	COIL TUN 1 100Z-121 100.00KHZ
FL151	EO-356809	COIL TUN 1 100Z-121 100.00KHZ
FL301	EO-356809	COIL TUN 1 100Z-121 100.00KHZ
FL351	EO-356809	COIL TUN 1 100Z-121 100.00KHZ
IB601	EH-408820J	COMP R RGLE10T 472J
IB602	EH-408713J	COMP R RGLE8T 332J
IB603	EH-408821J	COMP R RGLE12T 473J
IC101	EI-310036	IC TC4066BP
IC102	EI-393323J	IC M5218AL-771
IC201	EI-389322J	IC CXA1101P [570]
IC202	EI-394573J	IC CXA1331S [670]
IC301	EI-393323J	IC M5218AL-771
IC551	EI-394574J	IC LA2000
IC601	EI-408700J2	IC UPD75108CW-W25 MXA1DK3
IC602	EI-387938J	IC HD74LS05P
J201	EJ-394445J	SOCKET 52303-1411 BLACK 14P
L301	EO-394589J	COIL FIX 1 RCP095 822J
L302	EO-393645J	COIL FIX 1 RCP095 392J
L351	EO-394589J	COIL FIX 1 RCP095 822J
L352	EO-393645J	COIL FIX 1 RCP095 392J
L401	EO-403270J	COIL FIX 1 EL0405RA T05 101J
T401	EO-408699J	COIL OSC 1 T2134 100.0KHZ
TR101	ET-408709J	TR FET 2SK373 Y,GR T05
TR102	ET-375986	TR DTC124TS
TR103	ET-354364	TR DTC143TS
TR104	ET-354364	TR DTC143TS
TR105	ET-354364	TR DTC143TS
TR106	ET-354364	TR DTC143TS [670]
TR107	ET-370310	TR DTC144TS
TR108	ET-370310	TR DTC144TS
TR151	ET-408709J	TR FET 2SK373 Y,GR T05
TR152	ET-375986	TR DTC124TS
TR153	ET-354364	TR DTC143TS
TR154	ET-354364	TR DTC143TS
TR155	ET-354364	TR DTC143TS
TR156	ET-354364	TR DTC143TS [670]
TR157	ET-370310	TR DTC144TS
TR158	ET-370310	TR DTC144TS
TR181	ET-369248	TR DTA114YS
TR182	ET-370310	TR DTC144TS

Ref. No.	Part No.	Description
TR183	ET-370310	TR DTC144TS
TR184	ET-369248	TR DTA114YS
TR185	ET-369248	TR DTA114YS
TR186	ET-369248	TR DTA114YS
TR187	ET-354414	TR DTC144ES
TR188	ET-354414	TR DTC144ES
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR251	ET-397160J	TR 2SC3330 R,S,T,U,V
TR252	ET-397160J	TR 2SC3330 R,S,T,U,V
TR281	ET-354414	TR DTC144ES
TR301	ET-397160J	TR 2SC3330 R,S,T,U,V
TR302	ET-354364	TR DTC143TS
TR303	ET-354364	TR DTC143TS
TR304	ET-354364	TR DTC143TS
TR305	ET-408777J	TR FET 2SJ40 D,E T05
TR351	ET-397160J	TR 2SC3330 R,S,T,U,V
TR352	ET-354364	TR DTC143TS
TR353	ET-354364	TR DTC143TS
TR354	ET-354364	TR DTC143TS
TR355	ET-408777J	TR FET 2SJ40 D,E T05
TR381	ET-369248	TR DTA114YS
TR401	ET-354414	TR DTC144ES
TR402	ET-354414	TR DTC144ES
TR403	ET-397160J	TR 2SC3330 R,S,T,U,V
TR404	ET-373391	TR DTC143ZS
TR405	*ET-373025	TR 2SD1944 J1,J2,K
TR406	*ET-397160J	TR 2SC3330 R,S,T,U,V
TR407	*ET-397160J	TR 2SC3330 R,S,T,U,V
TR408	ET-354364	TR DTC143TS
TR409	ET-400741J	TR 2SC3708 T T05
TR410	ET-400741J	TR 2SC3708 T T05
TR501	ET-397160J	TR 2SC3330 R,S,T,U,V
TR502	ET-397160J	TR 2SC3330 R,S,T,U,V
TR503	ET-397160J	TR 2SC3330 R,S,T,U,V
TR504	ET-397160J	TR 2SC3330 R,S,T,U,V
TR505	ET-397160J	TR 2SC3330 R,S,T,U,V
TR506	ET-397160J	TR 2SC3330 R,S,T,U,V
TR601	ET-373485	TR DTC123JS
TR602	ET-369248	TR DTA114YS
TR603	ET-373382	TR DTA143ZS
TR606	ET-354365	TR DTC114YS
TR607	ET-354365	TR DTC114YS
TR608	ET-361736	TR 2SC3576
TR609	ET-361736	TR 2SC3576
TR610	ET-373485	TR DTC123JS
TR611	ET-373391	TR DTC143ZS
TR612	ET-361736	TR 2SC3576
TR613	ET-361736	TR 2SC3576
TR614	ET-373485	TR DTC123JS
TR615	ET-373391	TR DTC143ZS
TR616	ET-373391	TR DTC143ZS
TR617	ET-408772J	TR 2SA1318 S,T,U T05
TR618	ET-408772J	TR 2SA1318 S,T,U T05
TR653	ET-353899	TR 2SA1317 S,T,U
TR654	ET-353899	TR 2SA1317 S,T,U
TR655	ET-373382	TR DTA143ZS
TR656	ET-396072J	TR 2SD2159 V,W
TR657	ET-396072J	TR 2SD2159 V,W
TR658	ET-396072J	TR 2SD2159 V,W
TR659	ET-397160J	TR 2SC3330 R,S,T,U,V
TR660	ET-397160J	TR 2SC3330 R,S,T,U,V
TR761	ET-373985	TR DTA144TS
TR762	ET-354414	TR DTC144ES
TR763	ET-354414	TR DTC144ES
TR764	ET-397160J	TR 2SC3330 R,S,T,U,V
TR765	ET-354414	TR DTC144ES
VR101	EV-404323J	R S-FIX H V8K4-11 (1S) 0.10W332 [670]
VR102	EV-404323J	R S-FIX H V8K4-11 (1S) 0.10W332 [670]
VR151	EV-404323J	R S-FIX H V8K4-11 (1S) 0.10W332 [670]
VR152	EV-404323J	R S-FIX H V8K4-11 (1S) 0.10W332 [670]
VR301	EV-403967J	R S-FIX V T05EVNDCAA03 0.1W332 [670]
VR351	EV-403967J	R S-FIX V T05EVNDCAA03 0.1W332 [670]
VR402	EV-341251	R S-FIX V TM8KH1-1S 0.50W104 [670]
VR403	EV-341251	R S-FIX V TM8KH1-1S 0.50W104 [670]
VR651	EV-355380	R S-FIX H V8K4-11 (1S) 0.10W202
VR652	EV-355380	R S-FIX H V8K4-11 (1S) 0.10W202
VR653	EV-394561J	R S-FIX H V8K4-11 (1S) 0.10W102
VR654	EV-394561J	R S-FIX H V8K4-11 (1S) 0.10W102
X601	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ

12. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D801	ED-389638J	D LED GL3HY47 YELLOW
D802	ED-389638J	D LED GL3HY47 YELLOW
D803	ED-389638J	D LED GL3HY47 YELLOW
D804	ED-389638J	D LED GL3HY47 YELLOW
D805	ED-389638J	D LED GL3HY47 YELLOW
D806	ED-389638J	D LED GL3HY47 YELLOW
D807	ED-394723J	D LED GL3HY44 YELLOW
D808	ED-394723J	D LED GL3HY44 YELLOW
D809	ED-394724J	D LED GL3PR43 RED
SW801A	ES-408706J	SW SLIDE SSSS91 L=2 1-01-02N [570]
SW801B	ES-408708J	SW SLIDE SSSS91 L=2 1-01-03 [670]
TS801	ES-408703J	SW TACT EVQ 233 05R T05
TS802	ES-408703J	SW TACT EVQ 233 05R T05
TS803	ES-408703J	SW TACT EVQ 233 05R T05
TS804	ES-408703J	SW TACT EVQ 233 05R T05
TS805	ES-408703J	SW TACT EVQ 233 05R T05
TS806	ES-408703J	SW TACT EVQ 233 05R T05
TS807	ES-408703J	SW TACT EVQ 233 05R T05
TS808	ES-408703J	SW TACT EVQ 233 05R T05
TS809	ES-408703J	SW TACT EVQ 233 05R T05
TS810	ES-408703J	SW TACT EVQ 233 05R T05
TS811	ES-408703J	SW TACT EVQ 233 05R T05

FINAL ASSEMBLY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13. FINAL ASSEMBLY

Ref. No.	Part No.	Description
1A	SP-414252M	PANEL FRONT AX-570 (SG)
1B	SP-414271M	PANEL FRONT AX-670 (SG)
2	SE-394092M	REFLECTOR (SG)
3	SZ-414249M	RING FOOT (SG)
4	SA-394136M	CUSHION FOOT (SG)
5	SZ-401094J	LATCH 3Y18
6	SE-414264M	LENS OP (L) (SG)
7	SE-414265M	LENS OP (R) (SG)
8	SB-414255M	BUTTON OP (SG)
9	SB-414256J	BUTTON TAPE
10	SK-407866M	KNOB SLIDE (SG)
11	ZS-394414J	BT BID30X08STL BZN
12	SB-414258M	BUTTON POWER (SG)
13	SB-414259M	BUTTON SURROUND (SG)
14	ZS-407886J	BT PAN30X08STL BZN C100
15	SP-414253M	LID PANEL (L) (SG)
16	SP-414254M	LID PANEL (R) (SG)
17	SE-414263M	LID WINDOW (SG)
18	ZG-394158M	SP PLATE CASSETTE HOLDER (SG)
19	MZ-411689J	DUMPER 2G50-E
20	ZS-357727	ST PAN20X05STL CMT
21	BB-414756M1	MECHA GAK9311 [TAPE 1]
22	BB-414757M1	MECHA GAK9611 [TAPE 2]
23	ZG-407841J	SP TORSION EJECT (L)
24	ZG-407842J	SP TORSION EJECT (R)
25	SA-407840M	CUSHION FOOT REAR (SG)
26	ZS-404181J	BT BID30X06STL BZN
27	ZS-395789J	BT BID30X16STL BZN
28A	*BT-408727M	TRANS POW C1029 U [570]
28B	*BT-408728M	TRANS POW C1029 EV [E] [570]
28C	*BT-416526M	TRANS POW C1032 EV [V] [570]
28D	*BT-408729M	TRANS POW C1029 BS [570]
28E	*BT-408730M	TRANS POW C1030 U [670]
28F	*BT-408731M	TRANS POW C1030 EV [E] [670]
28G	*BT-416525M	TRANS POW C1033 EV [V] [670]
28H	*BT-408732M	TRANS POW C1030 BS [670]
29	ZS-346742	ST BID40X08STL CMT CUP
30A	SP-414428M	PANEL REAR AX-570 (U) (SG)
30B	SP-414429M	PANEL REAR AX-570 (E) (SG)
30C	SP-414430M	PANEL REAR AX-570 (V) (SG)
30D	SP-414431M	PANEL REAR AX-570 (B,S) (SG)
30E	SP-414432M	PANEL REAR AX-670 (U) (SG)
30F	SP-414433M	PANEL REAR AX-670 (E) (SG)
30G	SP-414434M	PANEL REAR AX-670 (V) (SG)
30H	SP-414435M	PANEL REAR AX-670 (B,S) (SG)
31	ZS-394412J	BT BID30X08STL BZN PROJECTION
32A	*EW-408722M	AC CORD200SZ4WH03VVH2F VHR3N U
32B	*EW-408724M	AC CORD200 SE1H03VVH2F VHR3N E [E,V]
32C	*EW-415021M	AC CORD 200 *A1030-B B
32D	*EW-412361M	AC CORD 200 SA-5VCTFK VHR-3N S
33	*EZ-371605	BUSH CORD 2271
34	*ES-349070	SW SELECTOR YKS11-0002 02-4 [SW901]
35	SE-407867M	LENS VR (SG)
36	SK-414260M	KNOB VR (SG)
37	SK-414261M	KNOB BALANCE (SG)
38	SP-407859M	COVER UPPER (SG)
39	SZ-414262M	RING VR (SG)

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

14. ACCESSARY

Ref. No.	Part No.	Description
1	AX-411759M	REMOCON RC-S670

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Part No.	Ref. No.
AX411759M	14-1
BAC1029T050A	3-1A
BAC1029T050B	3-1B
BAC1029T050C	3-1C
BAC1029T050D	3-1D
BAC1029T050E	3-1E
BAC1029T050F	3-1F
BAC1029T050G	3-1G
BAC1029T050H	3-1H
BAC1029T060D	3-2A
BAC1029T060E	3-2B
BB414756M1	13-21
BB414757M1	13-22
BF733191J	2-103
BF733192J	2-104
BM729993J	2-89
BT408727M	13-28A
BT408728M	13-28B
BT408729M	13-28D
BT408730M	13-28E
BT408731M	13-28F
BT408732M	13-28H
BT416525M	13-28G
BT416526M	13-28C
BZ733179J	2-102
BZ733194J	2-106
EC322028	2-110
EC363491	5-C201
EC363491	5-C203
EC383075J	4-C83A
EC383075J	4-C84A
EC389414J	5-C251
EC394535J	4-C83B
EC394535J	4-C84B
ED307572	4-D4
ED307572	4-D6
ED307572	5-D214
ED307572	11-D101
ED307572	11-D151
ED307572	11-D301
ED307572	11-D351
ED307572	11-D501
ED307572	11-D502
ED307572	11-D503
ED307572	11-D504
ED307572	11-D505
ED307572	11-D601
ED307572	11-D651
ED307572	11-D652
ED307572	11-D761
ED307572	11-D762
ED388320J	4-D5
ED388320J	4-D7
ED388320J	5-D207
ED388320J	5-D208
ED388320J	5-D209
ED389638J	12-D801
ED389638J	12-D802
ED389638J	12-D803
ED389638J	12-D804
ED389638J	12-D805
ED389638J	12-D806
ED391003J	11-D401
ED394509J	10-D701
ED394708J	4-D1
ED394723J	12-D807
ED394723J	12-D808
ED394724J	12-D809
ED400171J	5-D210
ED400171J	5-D211
ED408743J	11-D602
ED511907	4-D2
ED511907	4-D3
ED511907	4-D8
ED511907	5-D201
ED511907	5-D202
ED511907	5-D203
ED511907	5-D204
ED511907	5-D205
ED511907	5-D206
ED511907	5-D215
ED511907	5-D216
ED511907	11-D725
ED511907	11-D726
ED624903	11-D763
EF358974	5-F103
EF358974	5-F104
EF359007	5-F1A
EF359007	5-F2A
EF359086	4-F203B
EF359086	4-F204B
EF359225	4-F201B
EF359225	4-F202B
EF359225	4-F203A
EF359225	4-F204A
EF364518	4-F201A
EF364518	4-F202A
EF601964	5-F1B
EF601964	5-F2B
EF601964	5-F101
EF601964	5-F102
EH408713J	11-IB602
EH408820J	11-IB601
EH408821J	11-IB603
EI310036	11-IC101
EI358554	4-IC1B
EI367882J1	11-X601
EI387938J	11-IC602
EI389322J	11-IC201
EI393323J	11-IC102
EI393323J	11-IC301
EI394573J	11-IC202
EI394574J	11-IC551
EI394709J	4-IC1A
EI408700J2	11-IC601
EJ394445J	11-J201
EJ394455J	8-J501
EJ408698J	5-TM201
EJ408717J	5-J6
EJ733170J	2-86
EO338409	5-L203
EO356809	11-FL101
EO356809	11-FL151
EO356809	11-FL301
EO356809	11-FL351
EO393645J	11-L302
EO393645J	11-L352
EO394589J	11-L301
EO394589J	11-L351
EO403270J	11-L401
EO403613J	4-L1
EO403613J	4-L2
EO408699J	11-T401
EP733165J	2-82
ER331188	4-FR1
ER332225	4-FR2
ER341091	2-73
ER397193J	4-R9
ER397193J	4-R10
ER397193J	4-R59
ER397193J	4-R60
ER397194J	8-R501
ER397194J	8-R502
ER401042J	5-FR208
ES349070	13-34
ES408695J	8-SW501
ES408703J	9-TS601
ES408703J	12-TS801
ES408703J	12-TS802
ES408703J	12-TS803
ES408703J	12-TS804
ES408703J	12-TS805
ES408703J	12-TS806
ES408703J	12-TS807
ES408703J	12-TS808
ES408703J	12-TS809
ES408703J	12-TS810
ES408703J	12-TS811
ES408706J	12-SW801A
ES408708J	12-SW801B
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ES733468J	2-80
ET352726	5-TR206
ET353899	5-TR207
ET353899	6-TR302
ET353899	6-TR303
ET353899	11-TR653
ET353899	11-TR654
ET354364	11-TR103
ET354364	11-TR104
ET354364	11-TR105
ET354364	11-TR106
ET354364	11-TR153
ET354364	11-TR154
ET354364	11-TR155
ET354364	11-TR156
ET354364	11-TR302
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ET354364	11-TR304
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ET354364	11-TR354
ET354364	11-TR408
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ET354365	5-TR210
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ET354414	11-TR763
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ET361736	11-TR612
ET361736	11-TR613
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ET366581	5-TR208
ET366581	5-TR211
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ET369248	11-TR184
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ET369248	11-TR186
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ET373485	11-TR601
ET373485	11-TR610
ET373485	11-TR614
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ET397160J	11-TR202
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ET397160J	11-TR301
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ET408772J	11-TR618
ET408777J	11-TR305
ET408777J	11-TR355
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EV341251	11-VR402
EV341251	11-VR403
EV355380	11-VR651
EV355380	11-VR652
EV394561J	11-VR653
EV394561J	11-VR654
EV403967J	11-VR301
EV403967J	11-VR351
EV404323J	11-VR101
EV404323J	11-VR102
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EV404323J	11-VR152
EV408707J	6-VR301
EV408811J	7-VR401

Part No.	Ref. No.
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EW412361M	13-32D
EW415021M	13-32C
EW733167J	2-84
EW733169J	2-85B
EW733473J	2-85A
EZ371605	13-33
HP733172J	2-90A
HR733173J	2-90B
HZ733090J	2-5
HZ733119J	2-36
MA733472J	2-99
MB733469J	2-87
MB733470J	2-88
ML733088J	2-3
ML733106J	2-23
ML733111J	2-28
ML733115J	2-32
ML733117J	2-34
ML733118J	2-35
ML733123J	2-40
ML733124J	2-41
ML733125J	2-42
MR733129J	2-46
MR733466J	2-45
MS733097J	2-13
MS733122J	2-39
MT733109J	2-26
MT733110J	2-27
MZ411689J	13-19
MZ733096J	2-12
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MZ733105J	2-22
MZ733107J	2-24
MZ733108J	2-25
MZ733116J	2-33
MZ733120J	2-37
MZ733121J	2-38
MZ733131J	2-48
MZ733132J	2-49
SA394136M	13-4
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SB414255M	13-8
SB414256J	13-9
SB414258M	13-12
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SE414263M	13-17
SE414264M	13-6
SE414265M	13-7
SK407866M	13-10
SK414260M	13-36
SK414261M	13-37
SP407859M	13-38
SP414252M	13-1A
SP414253M	13-15
SP414254M	13-16
SP414271M	13-1B
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SP414432M	13-30E
SP414433M	13-30F
SP414434M	13-30G
SP414435M	13-30H
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SZ414249M	13-3
SZ414262M	13-39
SZ733150J	2-66
ZG394158M	13-18
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ZG733134J	2-51
ZG733136J	2-53
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ZG733142J	2-59
ZG733143J	2-60
ZG733144J	2-61
ZG733145J	2-62
ZG733146J	2-63A
ZG733147J	2-63B
ZG733154J	2-70
ZG733463J	2-2
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ZS346742	13-29
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ZS394412J	13-31
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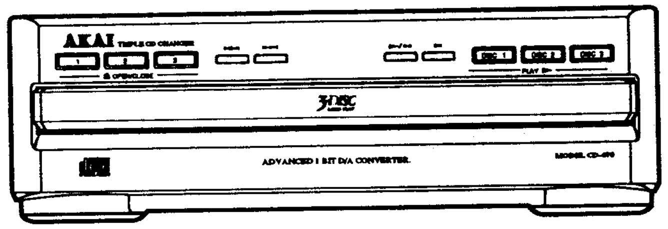
ZS733467J	2-68
ZS733471J	2-96
ZS733474J	2-94
ZW733149J	2-65
ZW733157J	2-74
ZW733158J	2-75
ZW733159J	2-76
ZW733160J	2-77
ZW733161J	2-78
ZW733162J	2-79

ABBREVIATIONS (AMPLIFIER)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A	Analog	MC	Moving Coil
AC	Alternating Current	MM	Moving Magnet
AMP	AMPlifier	PCB	Printed Circuit Board
CD	Compact Disc	R	Right
COM	COMmon	REG	REGulator
D	Digital	REC	RECord
D/A	Digital to Analog	TR	TRansistor
DAC	Digital to Analog Converter	SW	SWitch
DAT	Digital Audio Tape recorder	V.AMP	Voltage AMPlifier
DC	Direct Current	V.DISC	Video DISC
GND	GrouND	VR	Variable Resistance
L	Left	VTR	Video Tape Recorder
LED	Light Emitting Diode		

ABBREVIATIONS (CASSETTE)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi PleX
AR	Anti Recording	NC	Not Connected (No Connection)
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord (RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF (or F.FWD)	Fast Foward	SIG	SIGnal
FLD	FLuoresent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLtage
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitining Diode	X'TAL	cysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed



MODEL CD-670

COMPACT DISC PLAYER

MODEL CD-670

SPECIFICATIONS

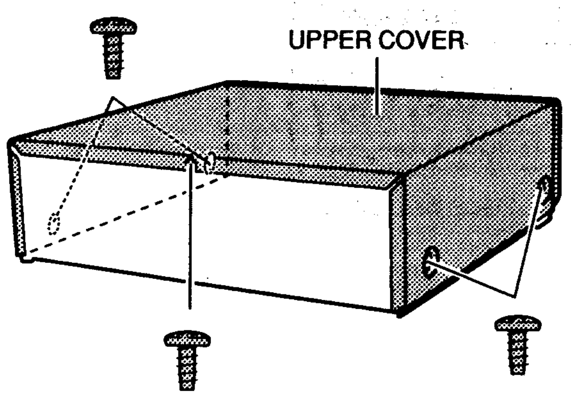
Type	3 discs auto changer
Pick up system	3 beam laser pick-up
Sampling frequency	44.1kHz
Error correction system	Cross interleave reed solomon
Number of channels	2 channel stereo
Frequency response	20 to 20,000Hz ±1dB
S/N ratio	95dB (A-weight)
Wow & flutter	Less than measurable limits
Total harmonic distortion	Less than 0.01% (at 1kHz)
Channel separation	85dB (at 1kHz)
Dynamic range	95dB
Dimensions	270(W) x 88(H) x 324(D)mm
Weight	2.5kg
Power requirement	Supplied from AX-570/670
Power consumption	10W

*For improvement purposes, specifications and design are subject to change without notice.

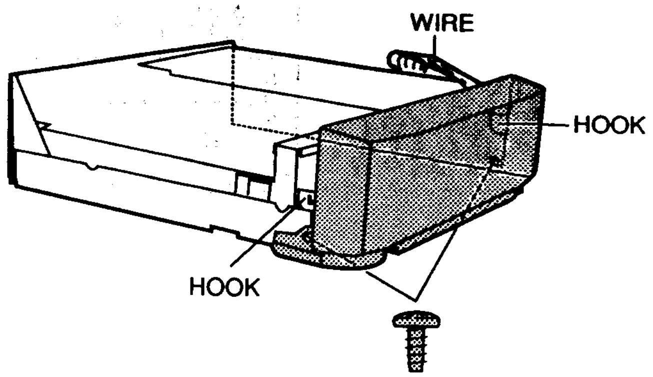
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.

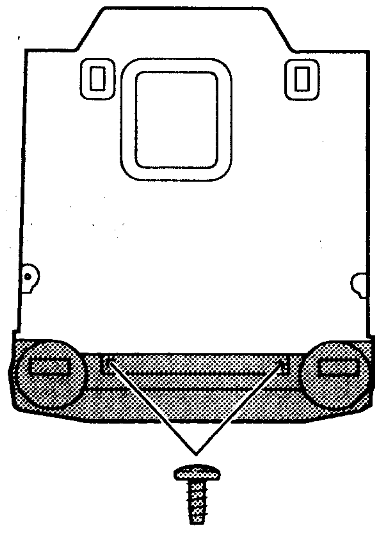
1. Removal of the UPPER COVER


UPPER COVER

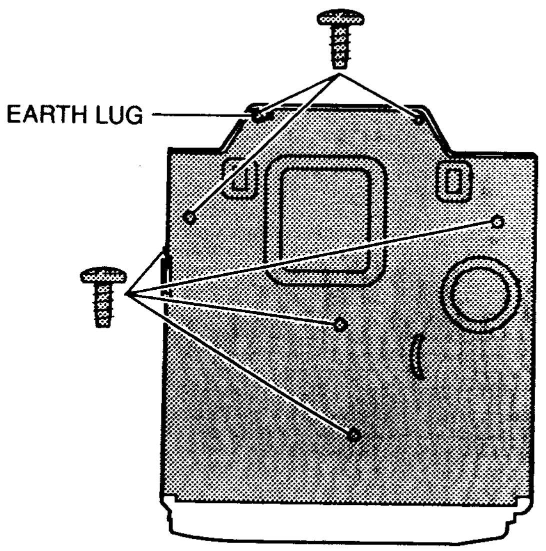
3


WIRE
HOOK
HOOK

2. Removal of the FRONT PANEL



4. Removal of the BOTTOM COVER



II. PRINCIPAL PARTS LOCATION

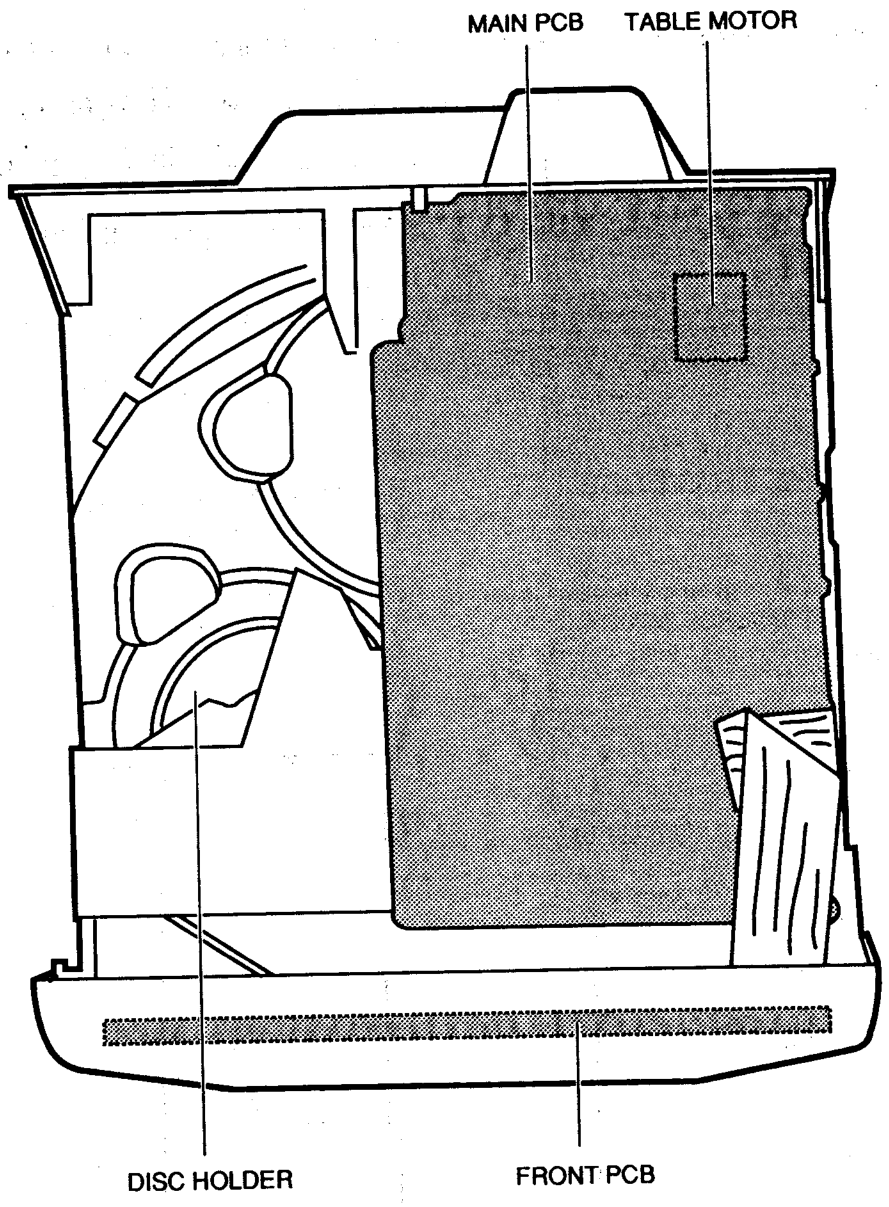

MAIN PCB
TABLE MOTOR
DISC HOLDER
FRONT PCB

Fig. 2-1 Top view

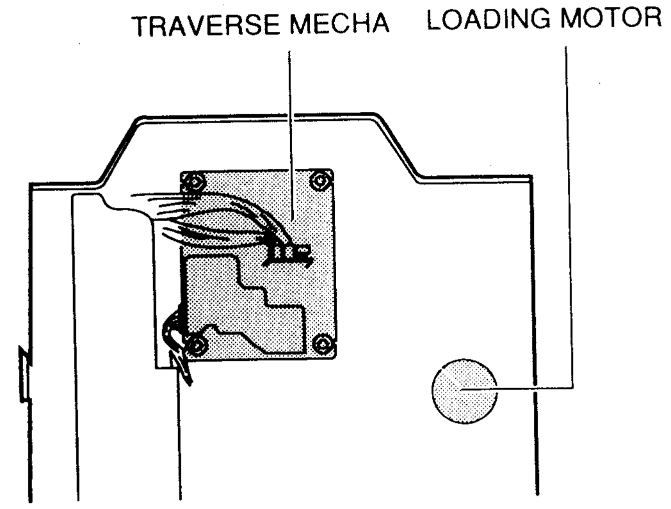
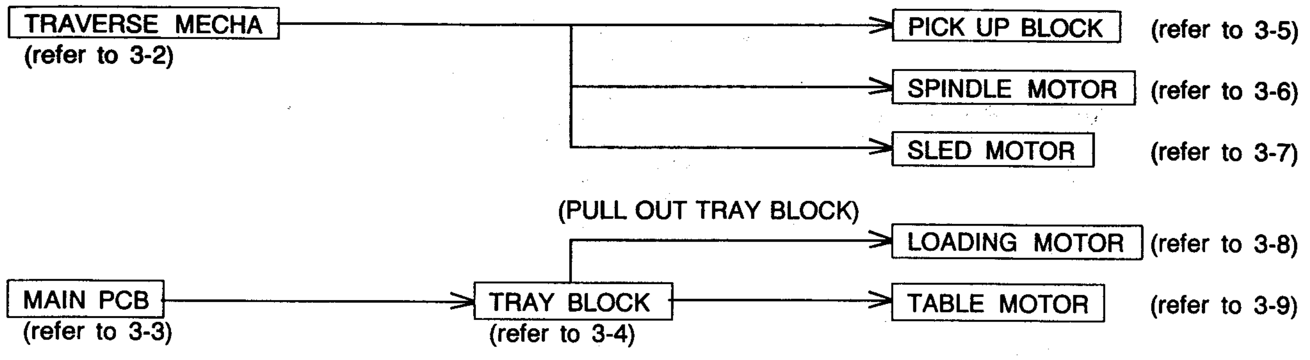

TRAVERSE MECHA
LOADING MOTOR

Fig. 2-2 Bottom view

III. REPLACEMENT OF THE PRINCIPAL COMPONENTS

3-1. DISMANTLING PROCEDURE OF THE COMPONENTS

When replacement of the mechanical parts is necessary, replace them using the following procedure.


TRAVERSE MECHA
(refer to 3-2)
PICK UP BLOCK
(refer to 3-5)
SPINDLE MOTOR
(refer to 3-6)
SLED MOTOR
(refer to 3-7)
(PULL OUT TRAY BLOCK)
LOADING MOTOR
(refer to 3-8)
MAIN PCB
(refer to 3-3)
TRAY BLOCK
(refer to 3-4)
TABLE MOTOR
(refer to 3-9)

3-2. REMOVAL OF THE TRAVERSE MECHA.

1) Disconnect the three connectors carefully (two connectors are on the PICK UP PCB and the other is on the MOTOR PCB of the TRAVERSE MECHA.).
2) Remove the four retaining screws, then remove the TRAVERSE MECHA.

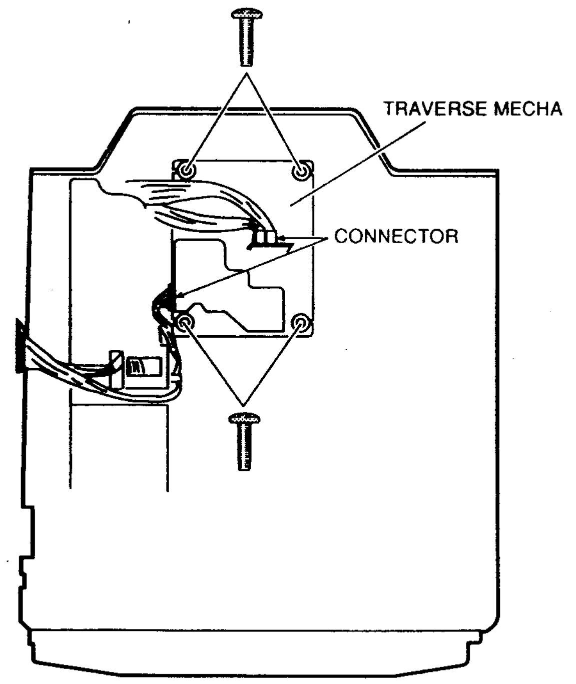

TRAVERSE MECHA
CONNECTOR

Fig. 3-1

3-3. REMOVAL OF THE MAIN PCB

1) Disconnect the P4, P5 and P6 connectors on the MAIN PCB.
2) Remove the four retaining screws of the MAIN PCB, then remove the MAIN PCB.

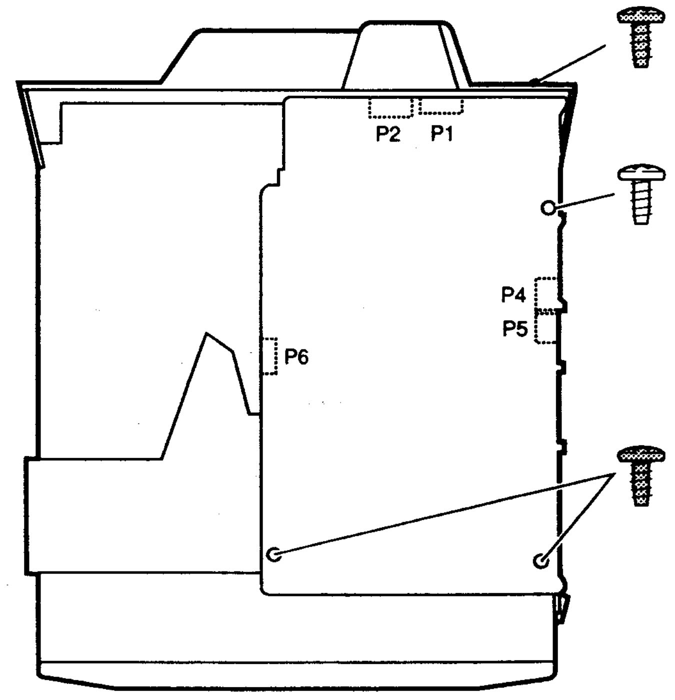

P2
P1
P4
P5
P6

Fig. 3-2

3-4.REMOVAL OF THE TRAY BLOCK

1) Remove the MAIN PCB.
2) Slide the GEAR HOLDER RETAINING SCREW in the direction of the arrow and pull out the TRAY BLOCK slowly.
3) Remove the MAIN PCB HOLDER RETAINING SCREWS then remove the MAIN PCB HOLDER and the BRACKETS on both side.
4) Remove the TRAY BLOCK.

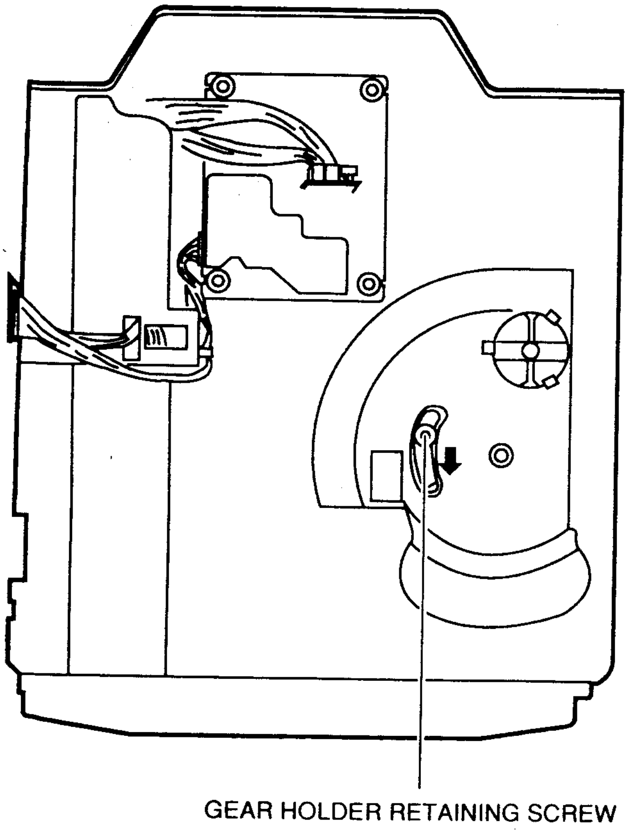

GEAR HOLDER RETAINING SCREW

Fig. 3-3

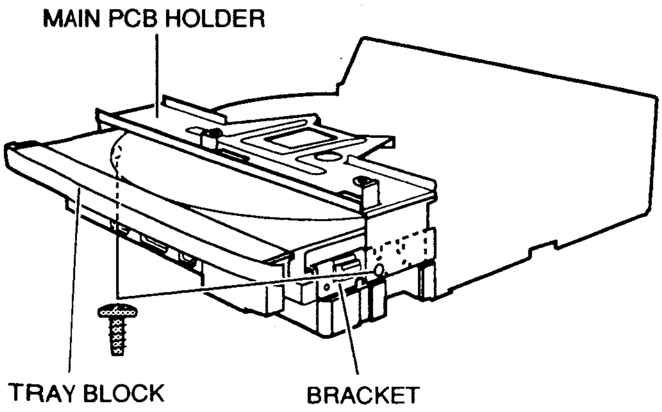

MAIN PCB HOLDER
TRAY BLOCK
BRACKET

Fig. 3-4

3-5.REPLACEMENT OF THE PICK UP BLOCK

1) Remove the TRAVERSE MECHA.
2) Push the Ⓐ stopper in the right direction and pull the SLIDE SHAFT in the forward direction to remove the PICK UP BLOCK, then replace the PICK UP BLOCK.
3) Reassemble in the reverse order.

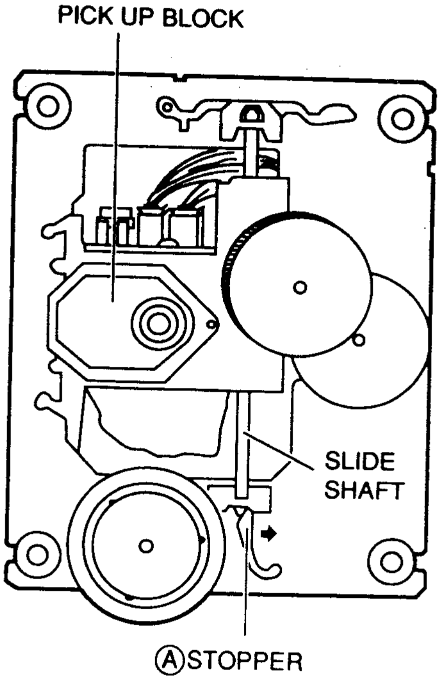

PICK UP BLOCK
SLIDE SHAFT
ⒶSTOPPER

Fig. 3-5

Note : To protect the laser diode from damage caused by high voltage static electricity, a part of the P.C Board on the PICK UP BLOCK has to be shorted (as shown in Fig. 3-6) before disconnecting the connectors. After replacement, be sure to connect the two connectors and then remove the solder at the shorted part before turning the power ON.

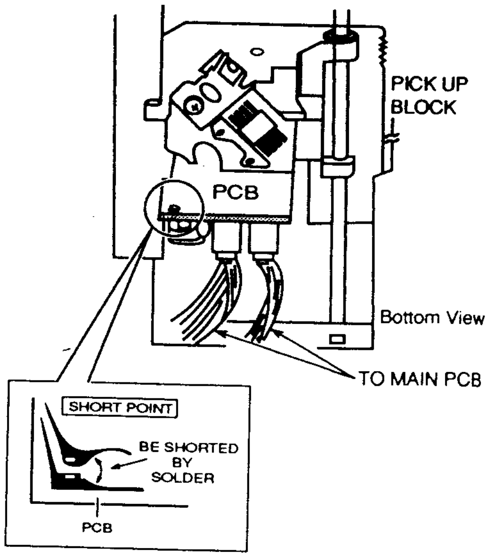

PICK UP BLOCK
PCB
Bottom View
TO MAIN PCB
SHORT POINT
BE SHORTED BY SOLDER
PCB

Fig. 3-6

3-6.REPLACEMENT OF THE SPINDLE MOTOR

Replacement of the SPINDLE MOTOR itself is not recommended, because the adjustment of the TURN TABLE height is quite critical and necessitating the use of a special jig.

3-7.REPLACEMENT OF THE SLED MOTOR

1) Remove the TRAVERSE MECHA.
2) Unsolder the leads of SPINDLE and SLED MOTORs on the MOTOR PCB and then remove the MOTOR PCB.
3) Remove the SLED MOTOR RETAINING Ⓑ SCREWS, then replace the SLED MOTOR.
4) Reassemble in the reverse order.

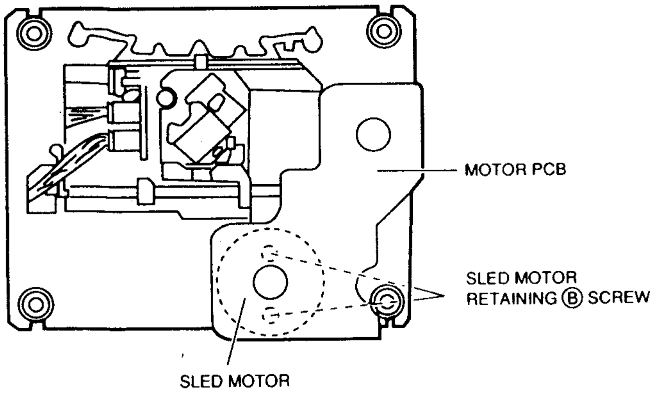

MOTOR PCB
SLED MOTOR RETAINING Ⓑ SCREW
SLED MOTOR

Fig. 3-7

3-8.REPLACEMENT OF THE LOADING MOTOR

1) Push the GEAR HOLDER RETAINING SCREW in the direction of the arrow, then pull out the TRAY BLOCK (as shown in Fig. 3-3).
2) Remove the LOADING BELT.
3) Unsolder the lead wires of the LOADING MOTOR with a soldering iron.
4) While opening the LOADING MOTOR's three RETAINING HOOKs, remove and replace the LOADING MOTOR.
5) Reassemble in the reverse order.

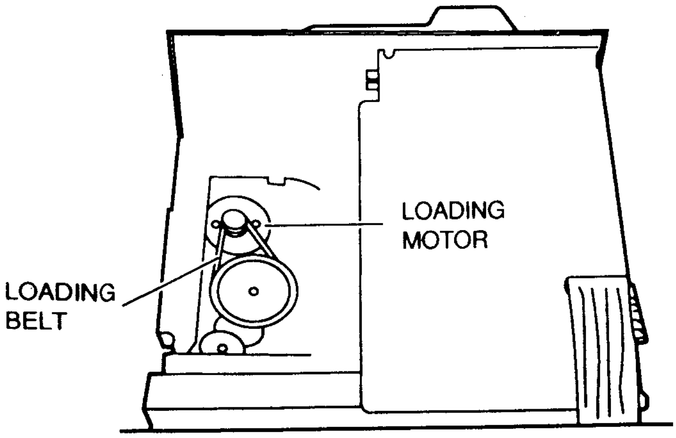

LOADING MOTOR
LOADING BELT

Fig. 3-8

3-9.REPLACEMENT OF THE TABLE MOTOR

1) Remove the MAIN PCB.
2) Remove the TRAY BLOCK.
3) Remove the DISC HOLDER RETAINING SCREW then remove DISC HOLDER.
4) Peel off the GEAR COVER then remove the TABLE GEAR (B) and WORM WHEEL TABLE GEAR.
5) Unsolder the lead wires of the TABLE MOTOR.
6) Remove the TABLE MOTOR while opening the TABLE MOTOR RETAINING HOOK, then replace the TABLE MOTOR.
7) Reassemble in the reverse order.

NOTE: 1) When reassembling, make sure that the TABLE GEAR (A)'s hole is aligned with the reference hole on the LOADING TRAY.
2) When installing the DISC HOLDER on the LOADING TRAY, make sure to place the DISC HOLDER so that "DISC 3" is facing upward ("DISC 2" faces right and "DISC1" faces left accordingly).

Bottom View

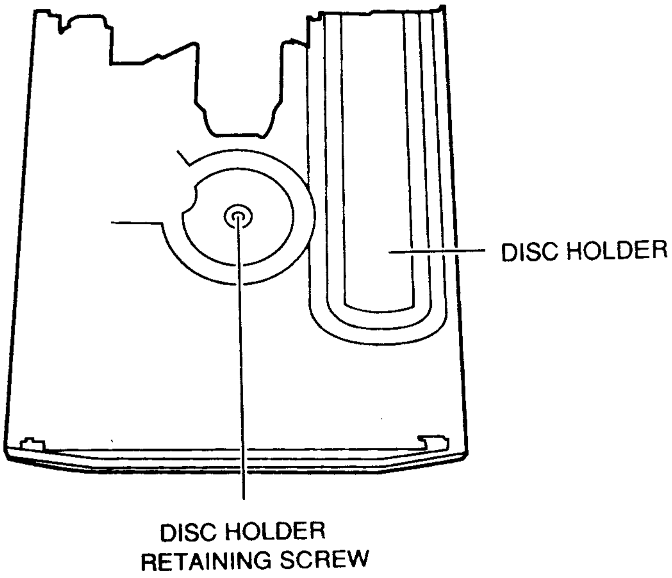

DISC HOLDER
DISC HOLDER RETAINING SCREW

Fig. 3-9

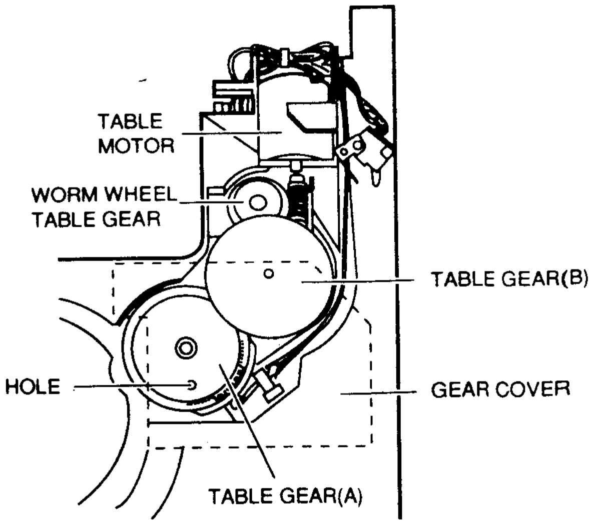


TABLE MOTOR
WORM WHEEL TABLE GEAR
TABLE GEAR(B)
HOLE
GEAR COVER
TABLE GEAR(A)

Fig. 3-10

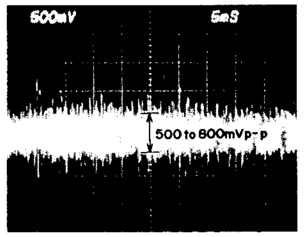
IV. ELECTRICAL ADJUSTMENT

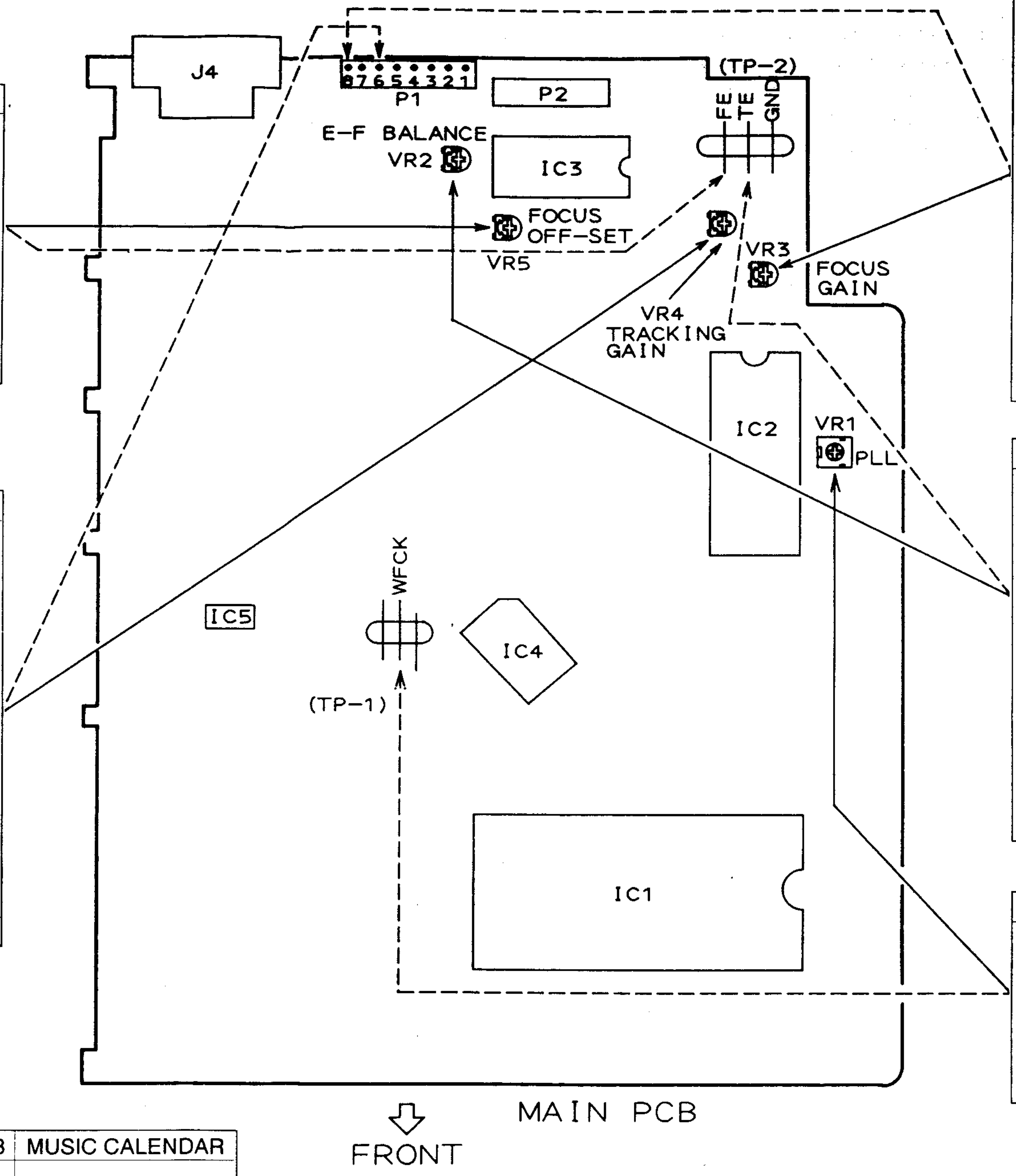
STEP | **ADJUSTMENT**
1. TEST DISC
2. TEST mode
3. TEST POINT and ADJUSTMENT parts.
4. REMARK (•), RESULT (✻)

Test point ADJ.part

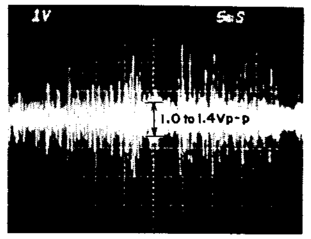
5 | FOCUS OFF-SET
1. Test disc SONY TYPE 3 (AT-711881)
2. Test mode 2 and 1
3. FE (TP-2) / VR 5
4. • Connect a digital DC voltmeter to the TP 2 (FE) and check the voltage A in the test mode 2, then press STOP button and adjust the voltage B so that the reading on the digital DC voltmeter is the same as voltage A.
   ✻ A = B

4 | TRACKING SERVO GAIN
1. Test disc SONY TYPE 3 (AT-711881)
2. Test mode 5
3. P1 ⑥ pin / VR 4
4. • Connect an oscilloscope to the P1 connector ⑥ pin.
   ✻ 500 to 800mVp-p

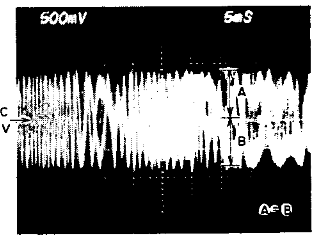




3 | FOCUS SERVO GAIN
1. Test disc SONY TYPE 3 (AT-711881)
2. Test mode 5
3. P1 ⑧ pin / VR 3
4. • Connect an oscilloscope to the P1 connector ⑧ pin
   ✻ 1.0 to 1.4Vp-p



2 | E-F BALANCE
1. Test disc SONY TYPE 3 (AT-711881)
2. Test mode 3
3. TE (TP 2) / VR 2
4. • Connect an oscilloscope to the TP 2 (TE)
   ✻ A = B



1 | PLL
1. -
2. Test mode 1
3. WFCK (TP-1) / VR 1
4. • Connect a frequency counter to the TP 1 (WFCK).
   ✻ 7,350 ± 10Hz

TEST MODE	HOW TO SET EACH MODE	FUNCTION	LED 1	LED 2	LED 3	MUSIC CALENDAR
1	While pressing the ■ and ▶▶I buttons, insert the power cord.	•Indicates that unit is set into the TEST mode.	ON	OFF	OFF	1
2	Press the ⏏ OPEN/CLOSE DISC 1 button	•FOCUS SERVO is on.	OFF	ON	OFF	2
3	Press the ⏏ OPEN/CLOSE DISC 2 button	•CLV-S SERVO is on.	ON	ON	OFF	3
4	Press the ⏏ OPEN/CLOSE DISC 3 button	•TRACKING SERVO is on.	OFF	OFF	ON	4
5	Press the PLAY ▶ DISC 1 button	•CLV-A and SLED SERVO are on.	ON	OFF	ON	5
6	Press the PLAY ▶ DISC 2 button	•ANTI SHOCK is on	OFF	ON	ON	6

Note :

- Before making adjustments 1 - 5, load a test disc as follows.
  After first setting the unit to the test mode 1, press the ▶ / ■■ button to open the disc tray and place a SONY TYPE 3 test disc on the DISC 1 holder. Press the ▶ / ■■ button again to close the tray. Adjustments can now be made.
- The disc tray can be opened or closed by pressing the ▶ / ■■ button (during any mode).
  After opening the tray, closing it will move the pick up to the inward position and return the unit to the TEST MODE 1.
- Pressing the ■ button will return the unit to the TEST MODE 1 regardless of the test mode presently engaged. However, the pick up will not be moved.
- Test modes can be selected directly.
- To disengage the test mode, unplug the AC power cord from the AC outlet.

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to [illegible] each part. Otherwise, the non-delivery [illegible]
2. Please make sure of [illegible] correct [illegible] If not, a part different from the one you ordered may be delivered. [illegible]
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A) [S] :SAA (Australia)
[B] :BEAB (England) [U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe) [V] :VDE (Germany)
[J] :JPN (Japan) [Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠(*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠(*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDÉES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

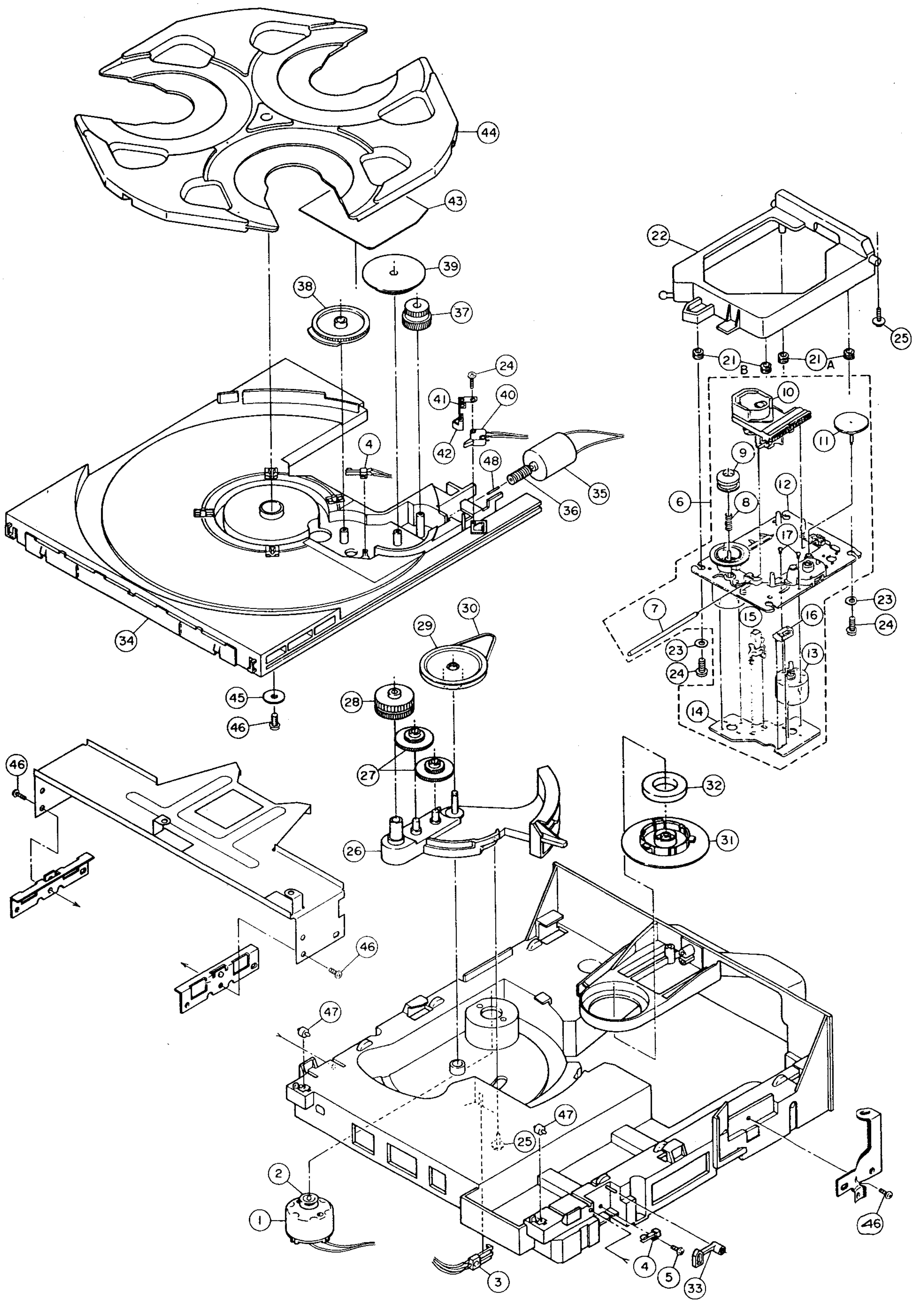
Ref. No.	Part No.	Description
1	*BB-408757N4	MECHA TRAVERSE KSM-2101ABM
2	BM-733203M	MOTOR GEAR ASSY (MB)
3	BM-374198	MOTOR RF-370CA-15370
4	BM-408752M1	MOTOR RF-500TB-14415
5	*BO-394728J1	PICK UP KSS-210A
6	ED-394723J	D LED GL3HY44 YELLOW
7	ED-307572	D SILICON H 1SS131
8	*ED-511907	D SILICON 1N4002 100/1.0A
9	ED-408721J	D ZENER H HZS2B3
10	ED-408720J	D ZENER H HZS3C1
11	ED-408719J	D ZENER H HZS4C2
12	ED-403743J	D ZENER H HZS6B3
13	*ED-400171J	D ZENER H HZS6C2L
14	EH-408654J	COMP R RGLE10T 223J
15	EH-404307J	COMP R RGLE13X 223J
16	EH-408656J	COMP R RGLE6X 472J
17	EI-330352	IC BA6109
18	EI-389264J	IC BA6209N
19	EI-390112J	IC CXA1081S
20	EI-390120J	IC CXA1082BS
21	EI-403497J	IC CXD1167Q
22	EI-387938J	IC HD74LS05P
23	EI-408657J1	IC M38002M4-126SP MXA1CD2
24	EI-393325J	IC M5218AP
25	EI-213390	IC NJM4558D
26	EI-408658J	IC PCM67U
27	EI-390149J	OSC CE CST4.23MGW 4.230MHZ
28	EI-381139N	OSC X'TAL HC-49/U 16934.400KHZ
29	ES-733205M	SW LEAF
30	ES-408754M	SW LEAF LSA-1119H
31	ES-408755M	SW LEAF LSA-2127E
32	ES-394427J	SW TACT SOR-133HS T05
33	ET-369248	TR DTA114YS
34	ET-360399	TR DTC114TS
35	ET-354365	TR DTC114YS
36	ET-354371	TR DTC124ES
37	ET-354364	TR DTC143TS
38	ET-353899	TR 2SA1317 S,T,U
39	ET-394919J	TR 2SB1329 Q,R T05
40	*ET-388338J	TR 2SB1425 S,E
41	*ET-397160J	TR 2SC3330 R,S,T,U,V
42	ET-379239	TR 2SD1380 Q,R
43	*ET-396072J	TR 2SD2159 V,W
44	MA-733202M	TURNTABLE CHASSIS ASSY (MB)

2. CD MECHANISM

Ref. No.	Part No.	Description
1	BM-408752M1	MOTOR RF-500TB-14415
2	MR-407764M	PULLEY (SG)
3	ES-408755M	SW LEAF LSA-2127E
4	ES-408754M	SW LEAF LSA-1119H
5	ZS-343082	PT BR26X08STL CMT
6	*BB-408757N4	MECHA TRAVERSE KSM-2101ABM
7	MS-733198M	SLIDE SHAFT
8	ZG-733199M	SP COMPRESSION
9	MZ-733200M	CENTER RING (LO)
10	*BO-394728J1	PICK UP KSS-210A
11	MZ-733201M	GEAR (A)
12	MA-733202M	TURNTABLE CHASSIS ASSY (MB)
13	BM-733203M	MOTOR GEAR ASSY (MB)
14	EA-733204M	MOTOR P.C BOARD (6P)
15	ES-733205M	SW LEAF
16	EJ-733206M	CONNECTOR 6P
17	ZS-477876	PAN20X03STL CMT
18	EW-408749M	WIRE ASSY YMC-02 PU1 8P
19	EW-408750M	WIRE ASSY YMC-02 PU2 8P
20	EW-408751M	WIRE ASSY YMC-02 TRAVERSE 6P
21A	MB-407746M1	INSULATOR (SG)
21B	MB-411992M1	INSULATOR (B) (SG)
22	MZ-407745M1	HOLDER TRAVERSE (SG)
23	ZW-409219M	PW23X100X100STL BZN (SG)
24	ZS-409503J	BT BID20X08STL BZN
25	ZS-407886J	BT PAN30X08STL BZN C100
26	BL-409250M	SG HOLDER GEAR PART
27	MZ-407734J1	GEAR LOADING (B)
28	MZ-407733M	GEAR LOADING (A) (SG)
29	MZ-407763J1	PULLEY GEAR
30	MB-407767M	BELT LOADING (SG)
31	MZ-410907J1	CLAMPER (B)
32	MZ-413089J	MAGNET FM30X17X5.2 4P
33	ML-407765J	LEVER SW LOADING
34	SC-407748M1	TRAY LOADING (SG)
35	BM-374198	MOTOR RF-370CA-15370
36	MZ-407740J	WORM TABLE
37	MZ-407739M	GEAR WORM WHEEL TABLE (SG)
38	MZ-407737M	GEAR TABLE (A) (SG)
39	MZ-407738M	GEAR TABLE (B) (SG)
40	ES-408758M	SW LEVER SSCTL-S-R
41	ZG-407741M	SP PLATE HOLDER DISK (SG)
42	ML-407742M2	LEVER SW (SG)
43	SZ-407750M	COVER GEAR (SG)
44	MZ-411049M	HOLDER DISK (B) (SG)
45	ZW-396336M	PW30X150X080STL CMT (SG)
46	ZS-394414J	BT BID30X08STL BZN
47	MR-407755M	ROLLER (SG)
48	MS-411215J	SHAFT WORM

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

CD MECHANISM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3. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1	BA-P2069T030C	ML PC (#) CD BLK CD-670/ML

PC (#) CD BLK CONSISTS OF FOLLOWING P.C BOARDS.

- MAIN P.C BOARD
- FRONT P.C BOARD

4. MAIN P.C BOARD

Ref. No.	Part No.	Description
D1	*ED-511907	D SILICON 1N4002 100/1.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D5	*ED-511907	D SILICON 1N4002 100/1.0A
D6	*ED-511907	D SILICON 1N4002 100/1.0A
D7	*ED-400171J	D ZENER H HZS6C2L
D9	*ED-400171J	D ZENER H HZS6C2L
D11	ED-307572	D SILICON H 1SS131
D12	ED-307572	D SILICON H 1SS131
D13	ED-307572	D SILICON H 1SS131
D14	ED-403743J	D ZENER H HZS6B3
D15	ED-400171J	D ZENER H HZS6C2L
D16	ED-408721J	D ZENER H HZS2B3
D17	ED-408720J	D ZENER H HZS3C1
D18	ED-408719J	D ZENER H HZS4C2
D19	ED-307572	D SILICON H 1SS131
D20	ED-307572	D SILICON H 1SS131
IB1	EH-404307J	COMP R RGLE13X 223J
IB2	EH-408654J	COMP R RGLE10T 223J
IB3	EH-408656J	COMP R RGLE6X 472J
IC1	EI-408657J1	IC M38002M4-126SP MXA1CD2
IC2	EI-390120J	IC CXA1082BS
IC3	EI-390112J	IC CXA1081S
IC4	EI-403497J	IC CXD1167Q
IC5	EI-408658J	IC PCM67U
IC6	EI-393325J	IC M5218AP
IC7	EI-213390	IC NJM4558D
IC8	EI-387938J	IC HD74LS05P
IC9	EI-389264J	IC BA6209N
IC10	EI-330352	IC BA6109
J4	EJ-408660J	SOCKET CFG1111-0161 BLUE 11P
R50	*ER-394882J	R OMF V T05 FS 1/2W 1R2J
R53	*ER-394882J	R OMF V T05 FS 1/2W 1R2J
TR1	*ET-397160J	TR 2SC3330 R,S,T,U,V
TR2	*ET-396072J	TR 2SD2159 V,W
TR3	*ET-396072J	TR 2SD2159 V,W
TR4	ET-396072J	TR 2SD2159 V,W
TR5	ET-353899	TR 2SA1317 S,T,U
TR6	*ET-388338J	TR 2SB1425 S,E
TR7	ET-353899	TR 2SA1317 S,T,U
TR8	ET-397160J	TR 2SC3330 R,S,T,U,V
TR9	ET-360399	TR DTC114TS
TR10	ET-354365	TR DTC114YS
TR11	ET-397160J	TR 2SC3330 R,S,T,U,V
TR12	ET-397160J	TR 2SC3330 R,S,T,U,V
TR13	ET-397160J	TR 2SC3330 R,S,T,U,V
TR14	ET-360399	TR DTC114TS
TR15	ET-360399	TR DTC114TS
TR16	ET-354371	TR DTC124ES
TR17	ET-354364	TR DTC143TS
TR18	ET-354364	TR DTC143TS
TR19	ET-369248	TR DTA114YS
TR21	ET-379239	TR 2SD1380 Q,R
TR22	ET-388338J	TR 2SB1425 S,E
TR23	ET-379239	TR 2SD1380 Q,R
TR24	ET-394919J	TR 2SB1329 Q,R T05
TR25	ET-396072J	TR 2SD2159 V,W
TR26	ET-388338J	TR 2SB1425 S,E
TR27	ET-396072J	TR 2SD2159 V,W
TR28	ET-388338J	TR 2SB1425 S,E
TR29	ET-354365	TR DTC114YS
TR30	ET-354365	TR DTC114YS
TR31	ET-354365	TR DTC114YS
VR1	EV-404260J	R S-FIX H RH0681C 0.30W 102
VR2	EV-358829	R S-FIX H RH0615C 0.10W 223
VR3	EV-358829	R S-FIX H RH0615C 0.10W 223
VR4	EV-358829	R S-FIX H RH0615C 0.10W 223
VR5	EV-356576	R S-FIX H RH0615C 0.10W 472
X1	EI-381139N	OSC X'TAL HC-49/U 16934.400KHZ
X2	EI-390149J	OSC CE CST4.23MGW 4.230MHZ

5. FRONT P.C BOARD

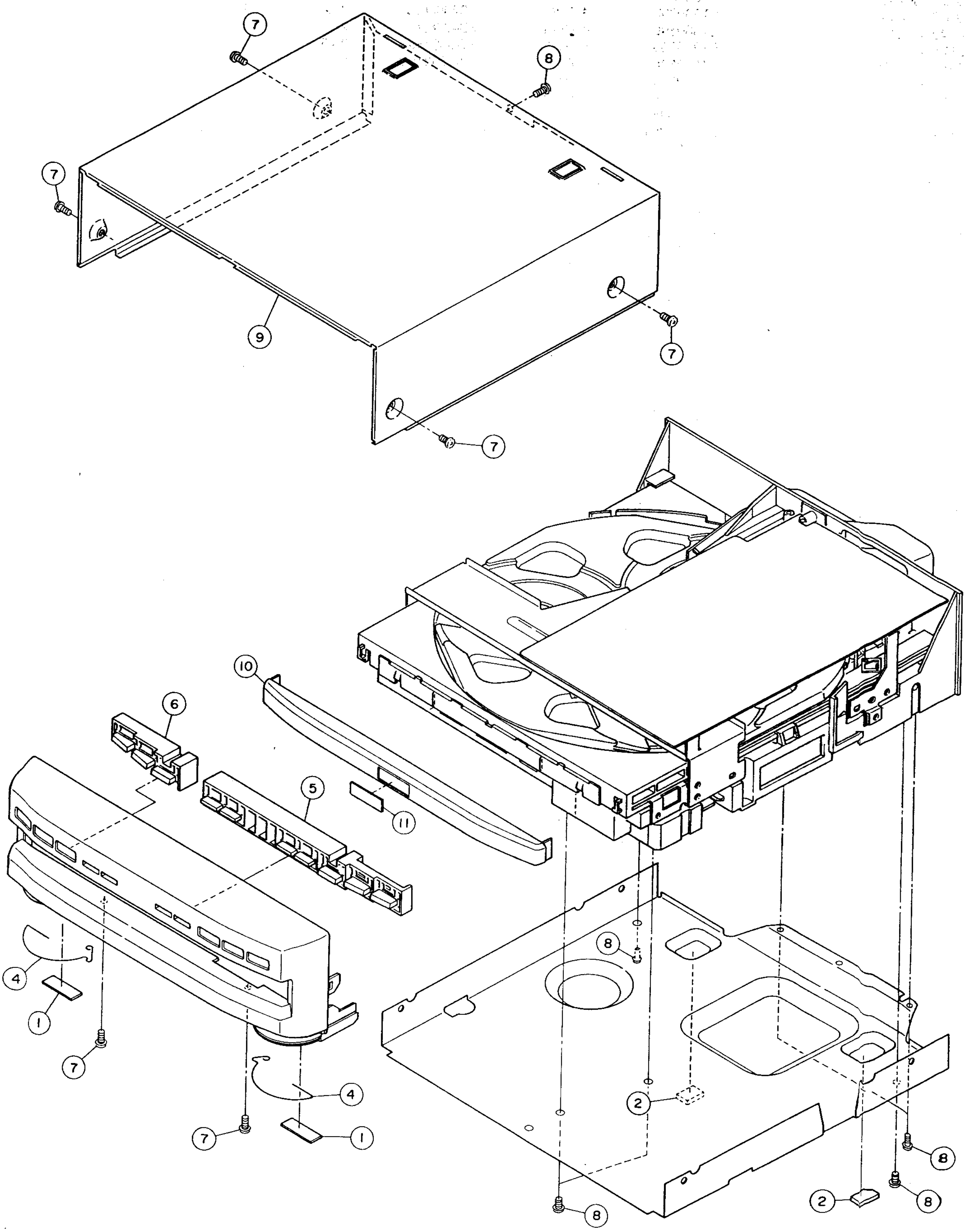
Ref. No.	Part No.	Description
D201	ED-394723J	D LED GL3HY44 YELLOW
D202	ED-394723J	D LED GL3HY44 YELLOW
D203	ED-394723J	D LED GL3HY44 YELLOW
TS201	ES-394427J	SW TACT SOR-133HS T05
TS202	ES-394427J	SW TACT SOR-133HS T05
TS203	ES-394427J	SW TACT SOR-133HS T05
TS204	ES-394427J	SW TACT SOR-133HS T05
TS205	ES-394427J	SW TACT SOR-133HS T05
TS206	ES-394427J	SW TACT SOR-133HS T05
TS207	ES-394427J	SW TACT SOR-133HS T05
TS208	ES-394427J	SW TACT SOR-133HS T05
TS209	ES-394427J	SW TACT SOR-133HS T05
TS210	ES-394427J	SW TACT SOR-133HS T05

6. FINAL ASSEMBLY

Ref. No.	Part No.	Description
1	SA-394136M	CUSHION FOOT (SG)
2	SA-407840M	CUSHION FOOT REAR (SG)
3	SP-414266M	PANEL FRONT CD-670 (SG)
4	SZ-414249M	RING FOOT (SG)
5	SB-414267M	BUTTON OP (SG)
6	SB-414269J	BUTTON OPEN
7	ZS-394414J	BT BID30X08STL BZN
8	ZS-394412J	BT BID30X08STL BZN PROJECTION
9	SP-408022M	COVER UPPER (SG)
10	SP-414270M	COVER TRAY (SG)
11	SM-414313J	NAME PLATE 3D

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

FINAL ASSEMBLY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Part No.	Ref. No.
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BB408757N4	2-6
BL409250M	2-26
BM374198	2-35
BM408752M1	2-1
BM733203M	2-13
BO394728J1	2-10
EA733204M	2-14
ED307572	4-D11
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ED307572	4-D19
ED307572	4-D20
ED394723J	5-D201
ED394723J	5-D202
ED394723J	5-D203
ED400171J	4-D7
ED400171J	4-D9
ED400171J	4-D15
ED403743J	4-D14
ED408719J	4-D18
ED408720J	4-D17
ED408721J	4-D16
ED511907	4-D1
ED511907	4-D2
ED511907	4-D3
ED511907	4-D4
ED511907	4-D5
ED511907	4-D6
EH404307J	4-IB1
EH408654J	4-IB2
EH408656J	4-IB3
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EI330352	4-IC10
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EI387938J	4-IC8
EI389264J	4-IC9
EI390112J	4-IC3
EI390120J	4-IC2
EI390149J	4-X2
EI393325J	4-IC6
EI403497J	4-IC4
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EW408751M	2-20
MA733202M	2-12
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ML407742M2	2-42
ML407765J	2-33
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MZ407740J	2-36
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SB414267M	6-5
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SP408022M	6-9
SP414266M	6-3
SP414270M	6-10
SZ407750M	2-43
SZ414249M	6-4
ZG407741M	2-41
ZG733199M	2-8
ZS343082	2-5
ZS394412J	6-8
ZS394414J	2-46
ZS394414J	6-7
ZS407886J	2-25
ZS409503J	2-24
ZS477876	2-17
ZW396336M	2-45
ZW409219M	2-23

ABBREVIATIONS (COMPACT DISC)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital (Convertor)	Mb	Mega Bits
ADC	Analog to Digital (Convertor)	MDA	Mortor Drive Amplifier
BCD	Binary Code Decimal	MFM	Modified Frequency Modulation
BPI	Bits per Inch	MM	Mono-stable Multivibrator
CD	Compact Disc	$\mathrm{M^2FM}$	Modified Modified Frequency Modulation
CIRC	Cross Interleaving & Reed Solomon Coding	MOD2	Modulo 2 (Addition)
CLV	Constant Linear Velocity	MP	Microprocessor
CP	Clock Pulses	MSB	Most Significant Bit
CRCC	Cyclic Redundancy Check Codes	NA	Numerical Aperture
D Level	Decision Level	NRZ	Non Return to Zero
D-A	Digital to Analog (Convertor)	NRZ-1	Non Return to Zero Inverted
DAC	Digital to Analog (Convertor)	P	Parity Data
DAD	Digital Audio Disc	PAM	Pulse Amplitude Modulation
DEM	Dynamic Element Matching	PCM	Pulse Code Modulation
DPD	Differential Phase Detection	PD	Phase Detector
DSV	Digital Sum Value	PE	Phase Encode
EFM	Eight to fourteen Modulation	PLL	Phase Locked Loop
EX-OR	EXclusive OR	PNM	Pulse Number Modulation
FCI	Flux Changes per Inch	PPM	Pulse Phase Modulation
FIR	Finite Impulse Response	PWM	Pulse Width Modulation
FP	Front Pulse	Q	Parity Data
FPG	Front Pulse Gate	R, R_1, R_2, etc.	Data for Right Channel
f	Frequency of Sampling	RAM	Random Access Memory
GF	Galois Field	RPG	Rear Pulse Gate
H & V (Parity)	Horizonal & Vertical	SCOOP	Self Coupled Optical Pick-up
IIR	Infinite Impulse Response	S & H	Sample & Hold
kb	Kilo Bits	S/N	Signal to Noise Ratio
L, L_1, L_2, etc.	Data for Left Channel	SSG	Standard Signal Generator
LPF	Low Pass Filter	SYSCON	SYStem CONtrol
LSB	Least Significant Bit		

AKAI

MODEL MX-570
(TP-570, AX-570, CD-670)

MODEL MX-670
(TP-670, AX-670, CD-670)

SCHEMATIC DIAGRAMS AND PC BOARDS

TABLE OF CONTENTS

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  3. CD-670 5

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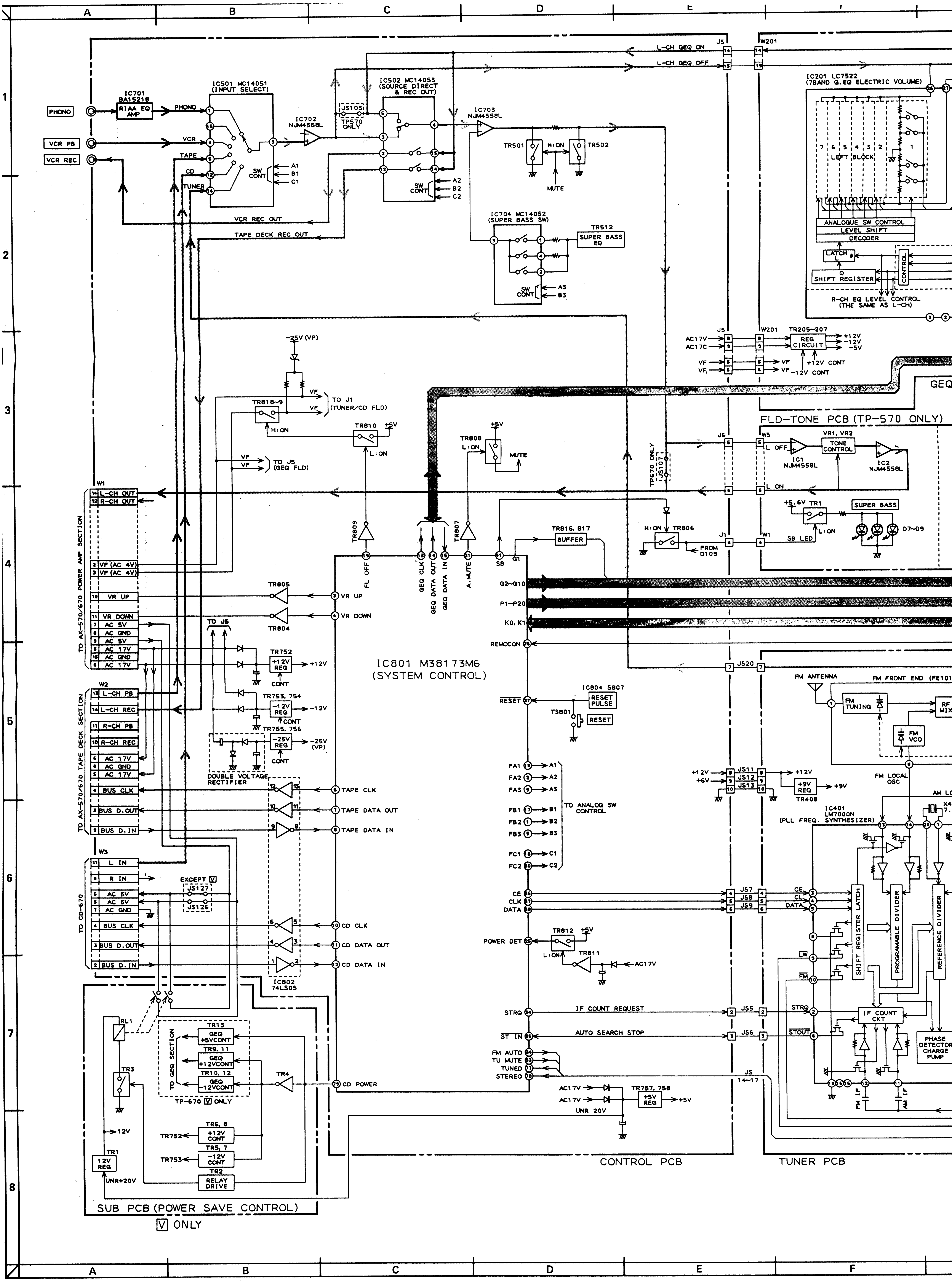
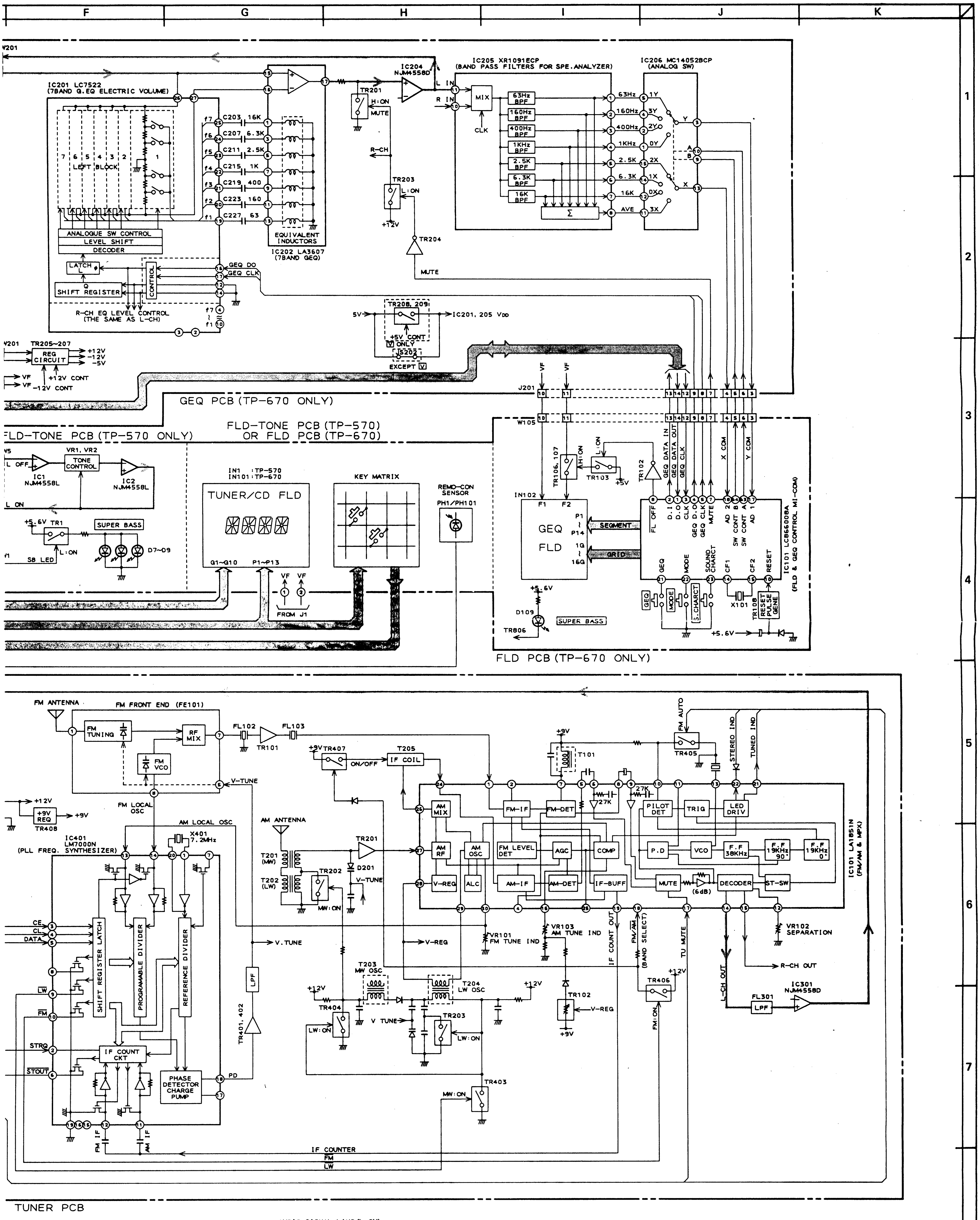
Use these schematic diagrams and PC boards together with the provided service manual.



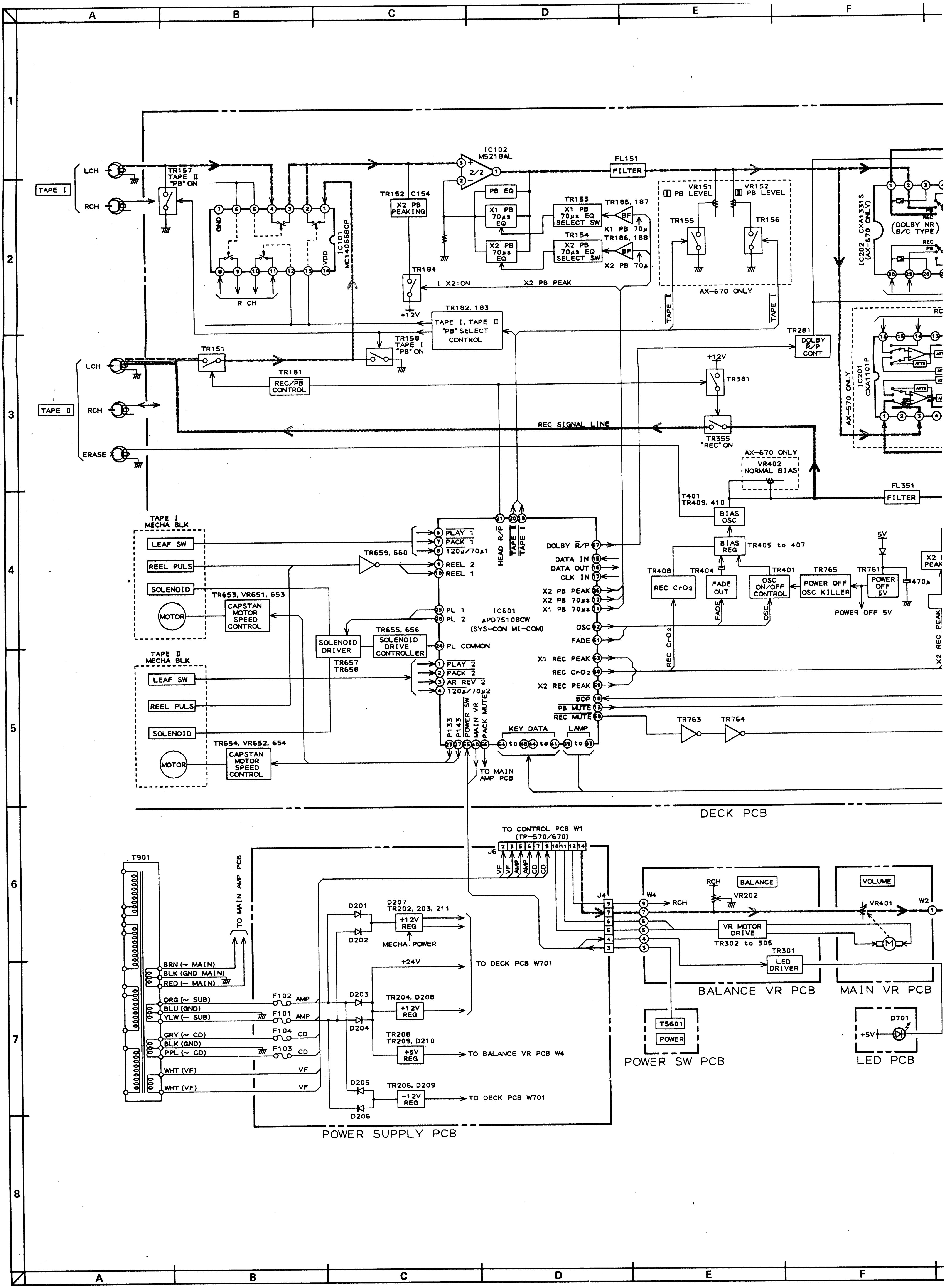
IC701 BA15218 RIAA EQ AMP
PHONO
VCR PB
VCR REC
IC501 MC14051 (INPUT SELECT)
PHONO
VCR
TAPE
CD
TUNER
SW CONT
A1
B1
C1
IC702 NJM4558L
JS105 TP570 ONLY
IC502 MC14053 (SOURCE DIRECT & REC OUT)
SW CONT
A2
B2
C2
IC703 NJM4558L
TR501
H:ON
TR502
MUTE
VCR REC OUT
TAPE DECK REC OUT
IC704 MC14052 (SUPER BASS SW)
TR512 SUPER BASS EQ
SW CONT
A3
B3
J5
W201
L-CH GEQ ON
L-CH GEQ OFF
IC201 LC7522 (7BAND G.EQ ELECTRIC VOLUME)
7 6 5 4 3 2 LEFT BLOCK 1
ANALOGUE SW CONTROL
LEVEL SHIFT
DECODER
LATCH
SHIFT REGISTER
CONTROL
R-CH EQ LEVEL CONTROL (THE SAME AS L-CH)
TR205~207 REG CIRCUIT
AC17V
AC17C
VF
+12V
-12V
-5V
+12V CONT
-12V CONT
GEQ
-25V (VP)
TR818~9
H:ON
VF
TO J1 (TUNER/CD FLD)
TR810 +5V L:ON
TR808 +5V L:ON MUTE
VF
TO J5 (GEQ FLD)
FLD-TONE PCB (TP-570 ONLY)
J6
W5
L OFF
VR1, VR2 TONE CONTROL
IC1 NJM4558L
IC2 NJM4558L
L ON
TP670 ONLY JS107
+5.6V TR1 L:ON
SUPER BASS
D7~09
H:ON TR806
FROM D109
J1
W1
SB LED
W1
L-CH OUT
R-CH OUT
TO AX-570/670 POWER AMP SECTION
VF (AC 4V)
VF (AC 4V)
VR UP
VR DOWN
AC 5V
AC GND
AC 5V
AC 17V
AC GND
AC 17V
TR809
FL OFF
GEQ CLK
GEQ DATA OUT
GEQ DATA IN
TR807
A.MUTE
SB
G1
TR816, 817 BUFFER
G2~G10
P1~P20
K0, K1
REMOCON
TR805
TR804
VR UP
VR DOWN
TO J5
TR752 +12V REG CONT +12V
TR753, 754 -12V REG CONT -12V
TR755, 756 -25V REG CONT -25V (VP)
DOUBLE VOLTAGE RECTIFIER
IC801 M38173M6 (SYSTEM CONTROL)
RESET
IC804 S807 RESET PULSE
TS801 RESET
W2
TO AX-570/670 TAPE DECK SECTION
L-CH PB
L-CH REC
R-CH PB
R-CH REC
AC 17V
AC GND
AC 17V
BUS CLK
BUS D.OUT
BUS D.IN
TAPE CLK
TAPE DATA OUT
TAPE DATA IN
FA1 A1
FA2 A2
FA3 A3
FB1 B1
FB2 B2
FB3 B3
FC1 C1
FC2 C2
TO ANALOG SW CONTROL
J7
J520
FM ANTENNA
FM FRONT END (FE101
FM TUNING
RF MIX
FM VCO
FM LOCAL OSC
+12V
+6V
JS11
JS12
JS13
+12V
+9V REG
TR408
+9V
IC401 LM7000N (PLL FREQ. SYNTHESIZER)
AM LO
W3
TO CD-670
L IN
R IN
EXCEPT V
JS127
JS126
AC 5V
AC 5V
AC GND
BUS CLK
BUS D.OUT
BUS D.IN
CD CLK
CD DATA OUT
CD DATA IN
IC802 74LS05
CE
CLK
DATA
JS7
JS8
JS9
CE
CL
DATA
SHIFT REGISTER LATCH
PROGRAMABLE DIVIDER
REFERENCE DIVIDER
LW
FM
POWER DET
TR812 +5V L:ON
TR811
AC17V
STRQ
IF COUNT REQUEST
JS5
STRQ
ST IN
AUTO SEARCH STOP
JS6
STOUT
IF COUNT CKT
PHASE DETECTOR CHARGE PUMP
FM AUTO
TU MUTE
TUNED
STEREO
JS 14~17
FM IF
AM IF
RL1
TR3
TR13 GEQ +5VCONT
TR9, 11 GEQ +12VCONT
TR10, 12 GEQ -12VCONT
TO GEQ SECTION
TP-670 V ONLY
TR4
CD POWER
AC17V
AC17V
TR757, 758 +5V REG +5V
UNR 20V
+12V
TR1 12V REG
UNR+20V
TR6, 8 +12V CONT
TR752
TR5, 7 -12V CONT
TR753
TR2 RELAY DRIVE
CONTROL PCB
TUNER PCB
SUB PCB (POWER SAVE CONTROL)
V ONLY
A B C D E F
1 2 3 4 5 6 7 8

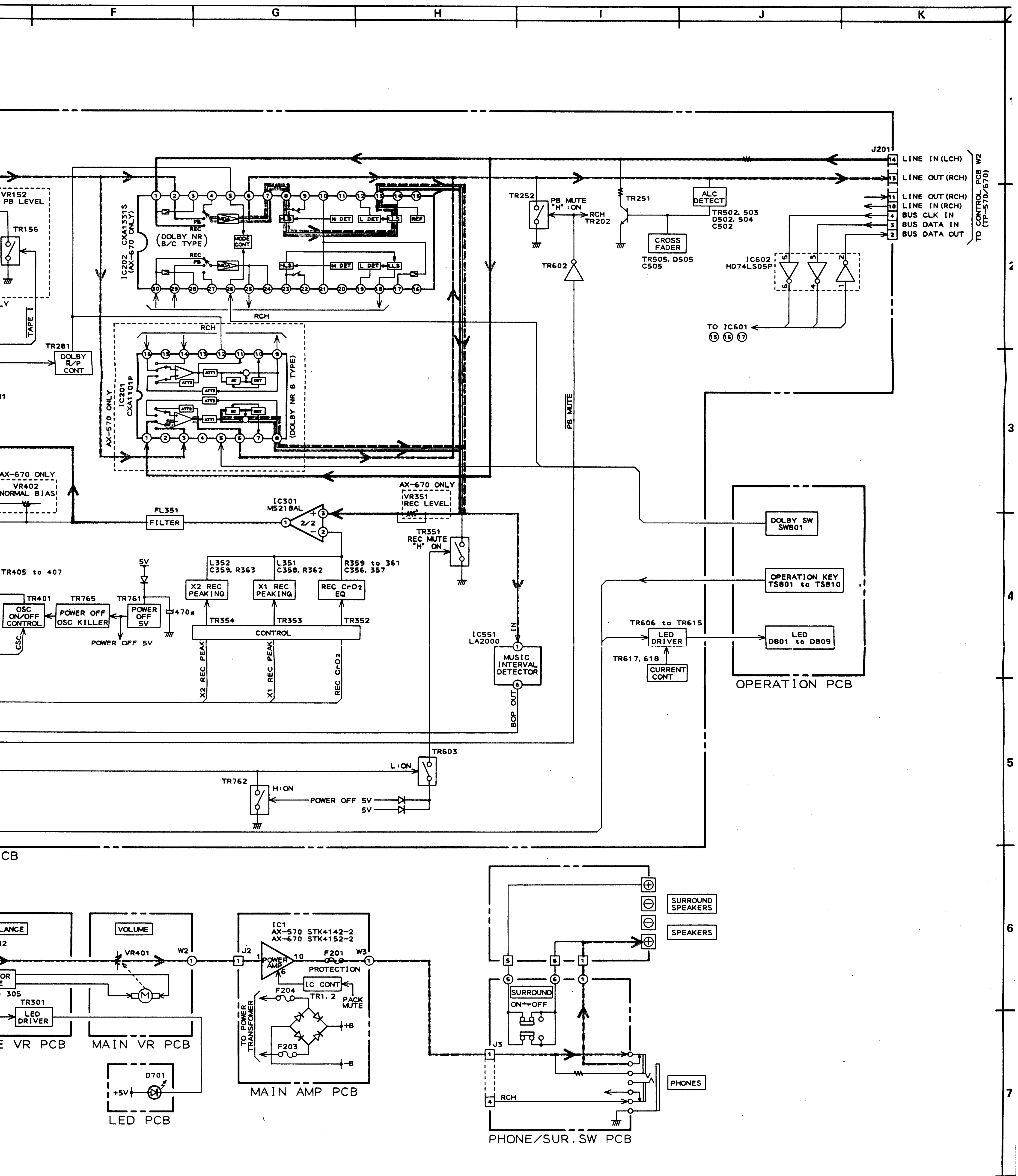


F
G
H
I
J
K
1
2
3
4
5
6
7
8
W201
IC201 LC7522
(7BAND G.EQ ELECTRIC VOLUME)
7 6 5 4 3 2 1
LEFT BLOCK
ANALOGUE SW CONTROL
LEVEL SHIFT
DECODER
LATCH
SHIFT REGISTER
CONTROL
R-CH EQ LEVEL CONTROL
(THE SAME AS L-CH)
GEQ DO
GEQ CLK
C203 16K
C207 6.3K
C211 2.5K
C215 1K
C219 400
C223 160
C227 63
EQUIVALENT INDUCTORS
IC202 LA3607
(7BAND GEQ)
IC204
NJM4558D
TR201
H:ON
MUTE
R-CH
TR203
L:ON
+12V
TR204
MUTE
IC205 XR1091ECP
(BAND PASS FILTERS FOR SPE.ANALYZER)
L IN
R IN
MIX
CLK
63Hz BPF
160Hz BPF
400Hz BPF
1KHz BPF
2.5K BPF
6.3K BPF
16K BPF
Σ
63Hz
160Hz
400Hz
1KHz
2.5K
6.3K
16K
AVE
IC206 MC14052BCP
(ANALOG SW)
1Y 3Y 2Y 0Y 2X 1X 0X 3X
Y
X
A
B
TR208, 209
5V
IC201, 205 VDD
+5V CONT
V ONLY
JS203
EXCEPT V
TR205~207
REG CIRCUIT
+12V
-12V
-5V
+12V CONT
VF
-12V CONT
J201
W105
GEQ PCB (TP-670 ONLY)
FLD-TONE PCB (TP-570)
OR FLD PCB (TP-670)
FLD-TONE PCB (TP-570 ONLY)
L OFF
VR1, VR2
TONE CONTROL
IC1 NJM4558L
IC2 NJM4558L
L ON
+5.6V TR1
L:ON
SUPER BASS
SB LED
D7~D9
IN1 :TP-570
IN101 :TP-670
TUNER/CD FLD
G1~G10
P1~P13
FROM J1
KEY MATRIX
REMO-CON SENSOR
PH1/PH101
TR106, 107
H:ON
L:ON
TR103
+5V
TR102
IN102
F1 F2
GEQ FLD
P1 ~ P14
1G ~ 16G
SEGMENT
GRID
GEQ DATA IN
GEQ DATA OUT
GEQ CLK
X COM
Y COM
FL OFF
D.I
D.O
CLK
GEQ D.O
GEQ CLK
MUTE
AD 2
SW CONT B
SW CONT A
AD 1
GEQ
MODE
SOUND CHARCT
CF1
CF2
RESET
IC101 LC866008A
(FLD & GEQ CONTROL MI-COM)
S.CHARCT
X101
TR108
RESET PULSE GENE
+5.6V
D109
TR806
SUPER BASS
FLD PCB (TP-670 ONLY)
FM ANTENNA
FM FRONT END (FE101)
FM TUNING
RF MIX
FM VCO
V-TUNE
FM LOCAL OSC
FL102
TR101
FL103
+12V
+9V REG
TR408
+9V
IC401
LM7000N
(PLL FREQ. SYNTHESIZER)
AM LOCAL OSC
X401 7.2MHz
CE
CL
DATA
LW
FM
STRQ
STOUT
SHIFT REGISTER LATCH
PROGRAMABLE DIVIDER
REFERENCE DIVIDER
IF COUNT CKT
PHASE DETECTOR CHARGE PUMP
PD
LPF
TR401, 402
V. TUNE
FM IF
AM IF
+9V TR407
ON/OFF
T205
IF COIL
AM ANTENNA
T201 (MW)
T202 (LW)
TR202
MW:ON
TR201
D201
V-TUNE
V-REG
T203 MW OSC
T204 LW OSC
+12V
TR404
LW:ON
V TUNE
TR203
LW:ON
TR403
MW:ON
AM MIX
AM RF
AM OSC
V-REG
ALC
FM-IF
FM-DET
FM LEVEL DET
AGC
AM-IF
AM-DET
IF-BUFF
COMP
+9V
T101
27K
PILOT DET
TRIG
LED DRIV
P.D
VCO
F.F 38KHz
F.F 19KHz 90°
F.F 19KHz 0°
MUTE
(6dB)
DECODER
ST-SW
FM AUTO
TR405
STEREO IND
TUNED IND
IC101 LA1851N
(FM/AM & MPX)
VR101
FM TUNE IND
VR103
AM TUNE IND
IF COUNT OUT
FM/AM
(BAND SELECT)
TU MUTE
TR102
V-REG
+9V
TR406
FM:ON
+12V
VR102
SEPARATION
R-CH OUT
L-CH OUT
FL301
LPF
IC301
NJM4558D
IF COUNTER
FM
LW
TUNER PCB

AUDIO SIGNAL LINE (L-CH)

TP-570/670
BLOCK DIAGRAM
NO.3-1 A601151M
A1

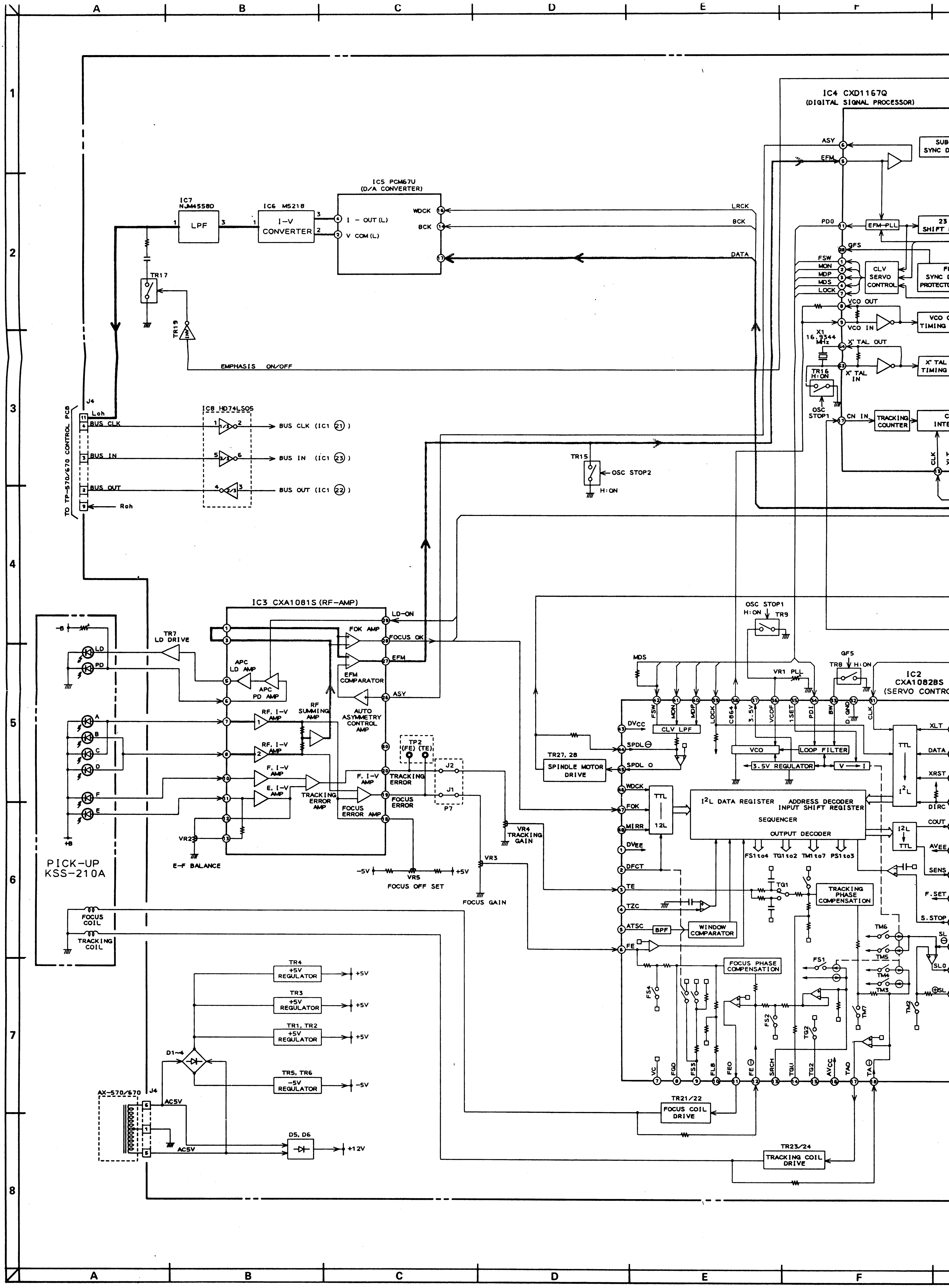

A
B
C
D
E
F
1
2
3
4
5
6
7
8
TAPE I
LCH
RCH
TR157
TAPE II
"PB" ON
IC101
MC14066BCP
GND
VDD
R CH
TR152 C154
X2 PB
PEAKING
IC102
M5218AL
2/2
PB EQ
X1 PB
70μs
EQ
X2 PB
70μs
EQ
TR153
X1 PB
70μs EQ
SELECT SW
TR154
X2 PB
70μs EQ
SELECT SW
TR185, 187
X1 PB 70μ
TR186, 188
X2 PB 70μ
BF
FL151
FILTER
VR151
I PB LEVEL
VR152
II PB LEVEL
TR155
TR156
AX-670 ONLY
TAPE II
TAPE I
TR184
I X2:ON
X2 PB PEAK
+12V
TR182, 183
TAPE I, TAPE II
"PB" SELECT
CONTROL
TR158
TAPE I
"PB" ON
IC202 CXA1331S
(AX-670 ONLY)
(DOLBY NR)
(B/C TYPE)
REC
PB
TR281
DOLBY
R/P
CONT
AX-570 ONLY
IC201
CXA1101P
TAPE II
LCH
RCH
ERASE
TR151
TR181
REC/PB
CONTROL
+12V
TR381
REC SIGNAL LINE
TR355
"REC" ON
AX-670 ONLY
VR402
NORMAL BIAS
FL351
FILTER
T401
TR409, 410
BIAS
OSC
BIAS
REG
TR405 to 407
TR408
REC CrO2
TR404
FADE
OUT
TR401
OSC
ON/OFF
CONTROL
TR765
POWER OFF
OSC KILLER
TR761
POWER
OFF
5V
5V
470μ
POWER OFF 5V
X2
PEAK
X2 REC PEAK
TAPE I
MECHA BLK
LEAF SW
REEL PULS
SOLENOID
MOTOR
TR653, VR651, 653
CAPSTAN
MOTOR
SPEED
CONTROL
TR659, 660
PLAY 1
PACK 1
120μ/70μ1
REEL 2
REEL 1
HEAD R/P
TAPE II
TAPE I
IC601
μPD75108CW
(SYS-CON MI-COM)
PL 1
PL 2
PL COMMON
SOLENOID
DRIVER
TR657
TR658
TR655, 656
SOLENOID
DRIVE
CONTROLLER
PLAY 2
PACK 2
AR REV 2
120μ/70μ2
DOLBY R/P
DATA IN
DATA OUT
CLK IN
X2 PB PEAK
X2 PB 70μs
X1 PB 70μs
OSC
FADE
X1 REC PEAK
REC CrO2
X2 REC PEAK
BOP
PB MUTE
REC MUTE
TR763
TR764
OSC
FADE
REC CrO2
TAPE II
MECHA BLK
LEAF SW
REEL PULS
SOLENOID
MOTOR
TR654, VR652, 654
CAPSTAN
MOTOR
SPEED
CONTROL
P133
P143
POWER SW
MAIN VR
PACK MUTE
KEY DATA
54 to 48 44 to 41
LAMP
39 to 33
TO MAIN
AMP PCB
DECK PCB
TO CONTROL PCB W1
(TP-570/670)
J6
2 3 5 6 7 9 10 11 12 14
VF
VF
AMP
AMP
CD
CD
T901
TO MAIN AMP PCB
BRN (~ MAIN)
BLK (GND MAIN)
RED (~ MAIN)
ORG (~ SUB)
BLU (GND)
YLW (~ SUB)
GRY (~ CD)
BLK (GND)
PPL (~ CD)
WHT (VF)
WHT (VF)
F102
AMP
F101
AMP
F104
CD
F103
CD
VF
VF
D201
D202
D207
TR202, 203, 211
+12V
REG
MECHA. POWER
+24V
TO DECK PCB W701
D203
D204
TR204, D208
+12V
REG
TR208
TR209, D210
+5V
REG
TO BALANCE VR PCB W4
D205
D206
TR206, D209
-12V
REG
TO DECK PCB W701
POWER SUPPLY PCB
J4
W4
RCH
BALANCE
VR202
VR MOTOR
DRIVE
TR302 to 305
TR301
LED
DRIVER
BALANCE VR PCB
VOLUME
VR401
W2
M
MAIN VR PCB
TS601
POWER
POWER SW PCB
D701
+5V
LED PCB

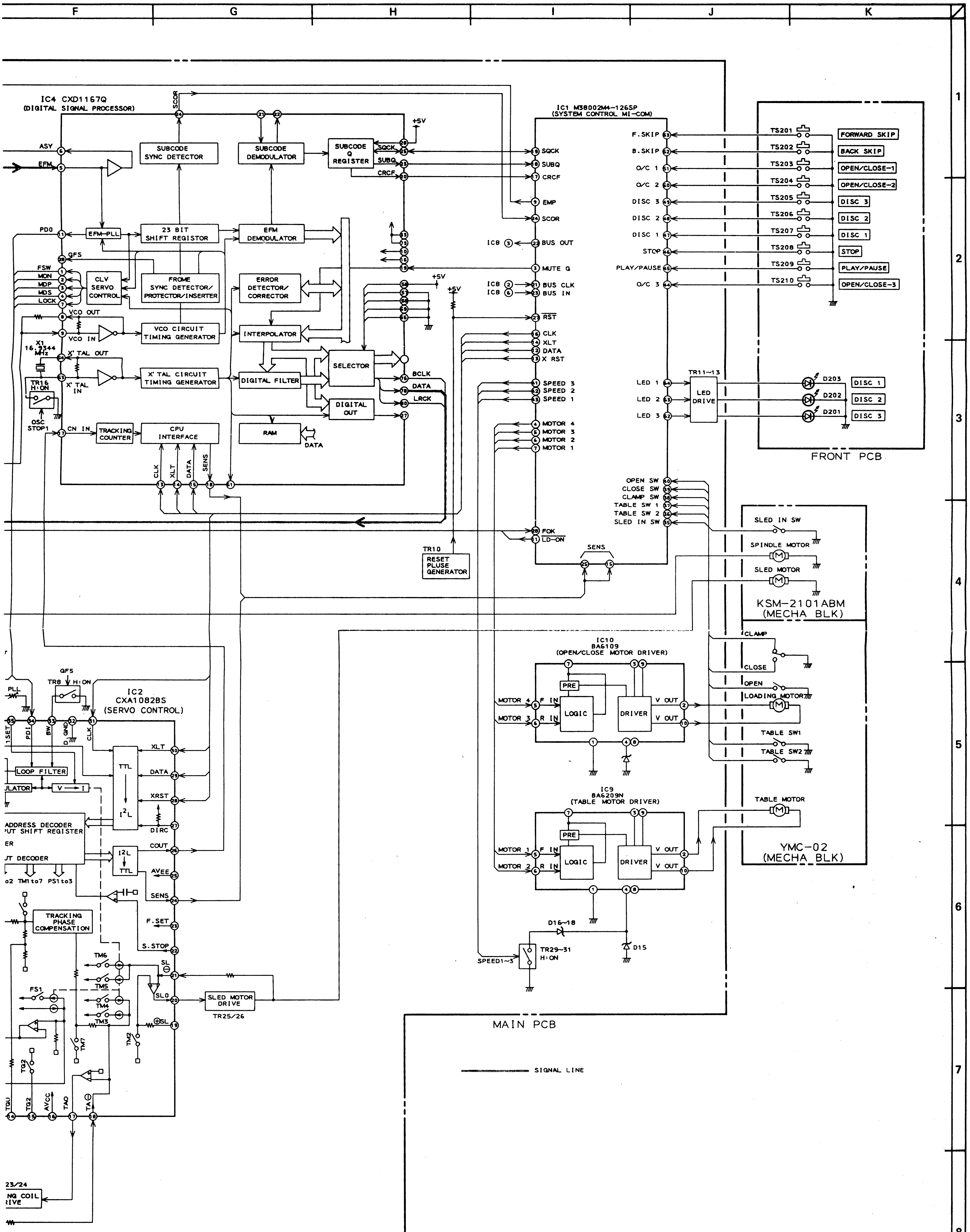

F
G
H
I
J
K
1
2
3
4
5
6
7
VR152
PB LEVEL
TR156
TAPE I
TR281
DOLBY R/P CONT
IC202 CXA1331S (AX-670 ONLY)
(DOLBY NR B/C TYPE)
PB
REC
MDA
MODE CONT
HLS
H DET
L DET
LLS
REF
M DET
RCH
IC201 CXA1101P
AX-570 ONLY
(DOLBY NR B TYPE)
ATT1
ATT2
SC
DET
AX-670 ONLY
VR402
NORMAL BIAS
FL351
FILTER
IC301
M5218AL
2/2
AX-670 ONLY
VR351
REC LEVEL
TR351
REC MUTE
"H" ON
L352
C359, R363
L351
C358, R362
R359 to 361
C356, 357
X2 REC PEAKING
X1 REC PEAKING
REC CrO2 EQ
TR354
TR353
TR352
CONTROL
X2 REC PEAK
X1 REC PEAK
REC CrO2
TR405 to 407
TR401
OSC ON/OFF CONTROL
OSC
TR765
POWER OFF OSC KILLER
TR761
POWER OFF 5V
5V
470μ
POWER OFF 5V
IC551
LA2000
IN
MUSIC INTERVAL DETECTOR
BOP OUT
TR603
L:ON
TR762
H:ON
POWER OFF 5V
5V
CB
TR252
PB MUTE
"H" :ON
RCH
TR202
TR251
ALC DETECT
TR502, 503
D502, 504
C502
CROSS FADER
TR505, D505
C505
TR602
PB MUTE
J201
LINE IN (LCH)
LINE OUT (RCH)
LINE OUT (RCH)
LINE IN (RCH)
BUS CLK IN
BUS DATA IN
BUS DATA OUT
TO CONTROL PCB W2 (TP-570/670)
IC602
HD74LS05P
TO IC601
⑮ ⑯ ⑰
DOLBY SW
SW801
OPERATION KEY
TS801 to TS810
TR606 to TR615
LED DRIVER
LED
D801 to D809
TR617, 618
CURRENT CONT
OPERATION PCB
LANCE
2
OR
305
TR301
LED DRIVER
E VR PCB
VOLUME
VR401
W2
M
MAIN VR PCB
D701
+5V
LED PCB
J2
IC1
AX-570 STK4142-2
AX-670 STK4152-2
POWER AMP
F201
W3
PROTECTION
IC CONT
TR1, 2
PACK MUTE
F204
F203
+B
-B
TO POWER TRANSFORMER
MAIN AMP PCB
SURROUND SPEAKERS
SPEAKERS
SURROUND
ON↔OFF
J3
RCH
PHONES
PHONE/SUR.SW PCB

- - - - - - - :PB SIGNAL LINE

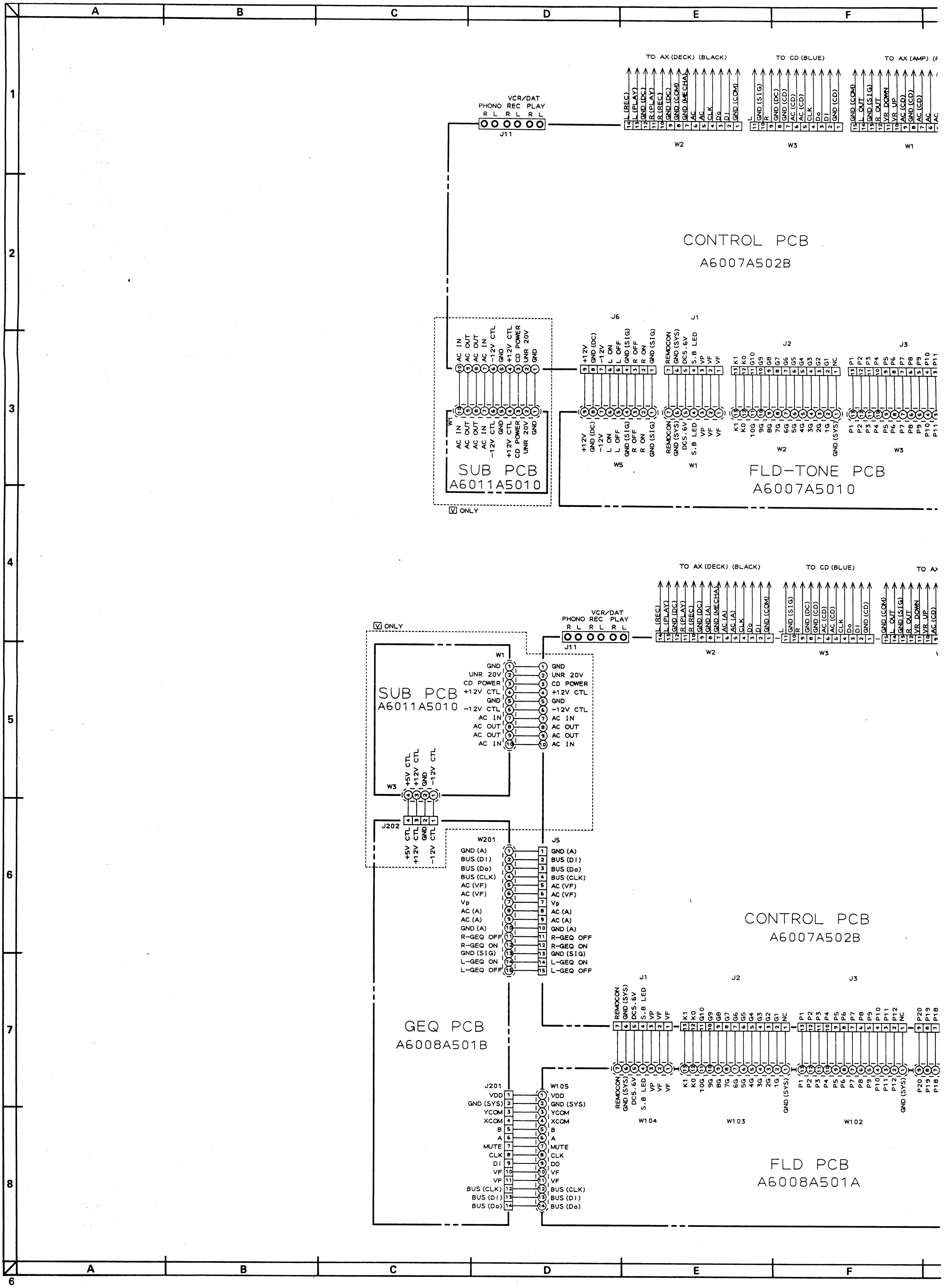
———————— :REC SIGNAL LINE

AX-570/670
BLOCK DIAGRAM
NO.3-2 C103251M
A1

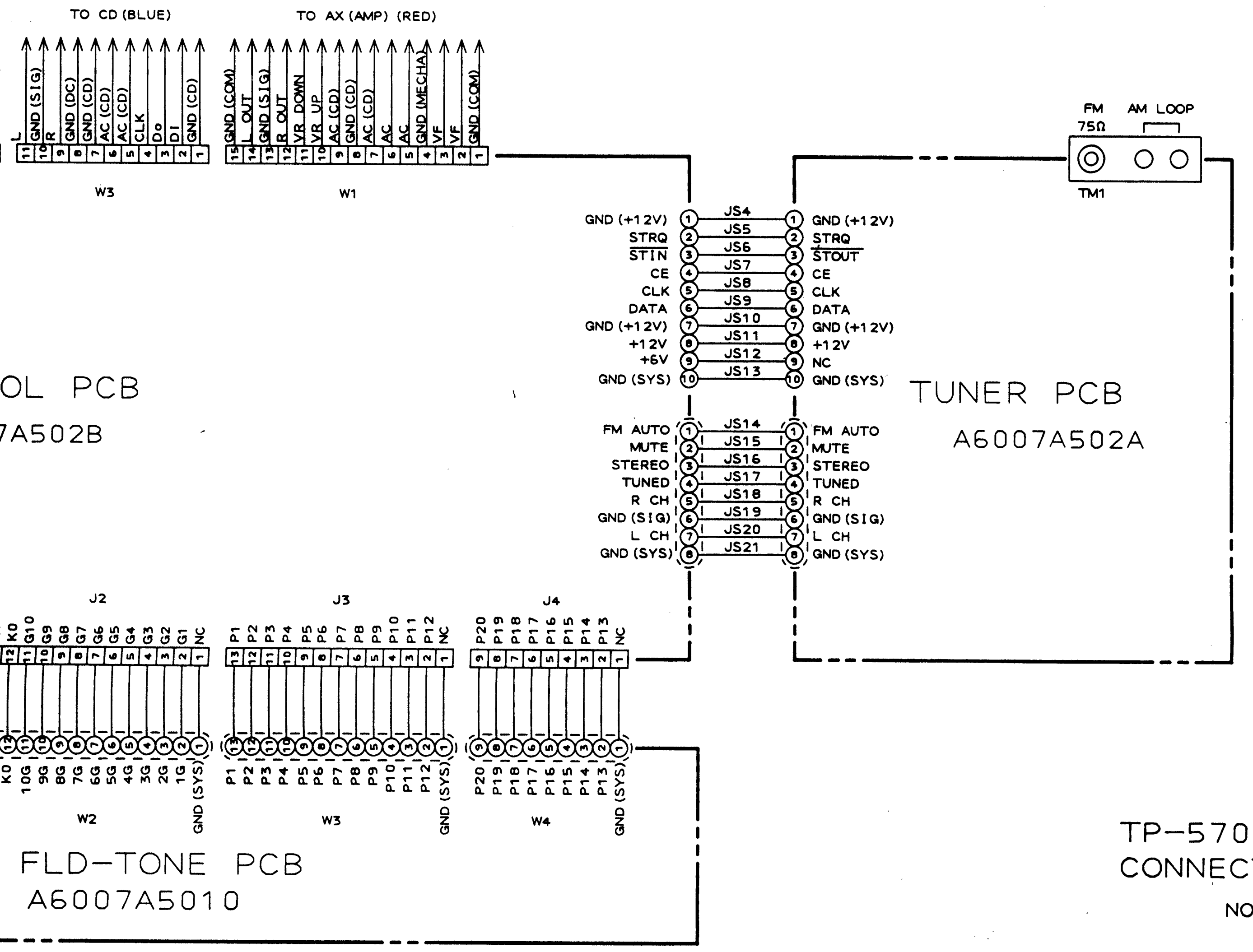

A
B
C
D
E
F
1
2
3
4
5
6
7
8
IC4 CXD1167Q
(DIGITAL SIGNAL PROCESSOR)
ASY
EFM
SUB
SYNC D
PDO
EFM-PLL
23
SHIFT
GFS
FSW
MON
MDP
MDS
LOCK
CLV SERVO CONTROL
SYNC D
PROTECTO
VCO OUT
VCO IN
VCO
TIMING
X1 16.9344 MHz
X' TAL OUT
X' TAL IN
X' TAL TIMING
TR16 H:ON
OSC STOP1
CN IN
TRACKING COUNTER
INTE
CLK
IC5 PCM67U
(D/A CONVERTER)
WDCK
BCK
I - OUT (L)
V COM (L)
LRCK
BCK
DATA
IC7 NJM4558D
LPF
IC6 M5218
I-V CONVERTER
TR17
TR19
EMPHASIS ON/OFF
J4
Loh
BUS CLK
BUS IN
BUS OUT
Roh
TO TP-570/670 CONTROL PCB
IC8 HD74LS05
BUS CLK (IC1 ㉑)
BUS IN (IC1 ㉓)
BUS OUT (IC1 ㉒)
TR15
OSC STOP2
H:ON
IC3 CXA1081S (RF-AMP)
LD-ON
FOK AMP
FOCUS OK
EFM
EFM COMPARATOR
ASY
AUTO ASYMMETRY CONTROL AMP
APC LD AMP
APC PD AMP
RF SUMMING AMP
RF, I-V AMP
F, I-V AMP
E, I-V AMP
TRACKING ERROR AMP
FOCUS ERROR AMP
F, I-V AMP
TRACKING ERROR
FOCUS ERROR
TP2 (FE) (TE)
J2
J1
P7
VR2
E-F BALANCE
VR4 TRACKING GAIN
VR3
FOCUS GAIN
VR5
FOCUS OFF SET
-5V
+5V
TR7 LD DRIVE
-B
LD
PD
A
B
C
D
F
E
+B
PICK-UP KSS-210A
FOCUS COIL
TRACKING COIL
OSC STOP1 H:ON
TR9
GFS
TR8 H:ON
IC2 CXA1082BS (SERVO CONTRO
MDS
VR1 PLL
FSW
MON
MDP
LOCK
C864
3.5V
VCOF
ISET
PDI
BW
GND
CLK
DVcc
SPDL ⊖
SPDL ⊕
CLV LPF
VCO
LOOP FILTER
3.5V REGULATOR
V → I
TR27, 28
SPINDLE MOTOR DRIVE
WDCK
FOK
MIRR
DVEE
TTL
I²L
I²L DATA REGISTER
ADDRESS DECODER
INPUT SHIFT REGISTER
SEQUENCER
OUTPUT DECODER
FS1to4
TG1to2
TM1to7
PS1to3
XLT
DATA
XRST
DIRC
COUT
AVEE
SENS
F.SET
S.STOP
DFCT
TE
TZC
ATSC
FE
TG1
TRACKING PHASE COMPENSATION
BPF
WINDOW COMPARATOR
FOCUS PHASE COMPENSATION
FS4
FS1
FS2
FS3
TG2
TM6
TM5
TM4
TM3
TM7
TM2
SL
SLO
VC
FGD
FS3
FLB
FEO
FE ⊖
SRCH
TGU
TG2
AVcc
TAO
TA ⊖
TR21/22
FOCUS COIL DRIVE
TR23/24
TRACKING COIL DRIVE
TR4 +5V REGULATOR
TR3 +5V REGULATOR
TR1, TR2 +5V REGULATOR
TR5, TR6 -5V REGULATOR
+5V
-5V
D1~4
AX-570/670
J4
AC5V
D5, D6
+12V


F
G
H
I
J
K
1
2
3
4
5
6
7
8
IC4 CXD1167Q
(DIGITAL SIGNAL PROCESSOR)
SCOR
+5V
ASY
EFM
SUBCODE SYNC DETECTOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
SQCK
SUBQ
CRCF
PDO
EFM-PLL
23 BIT SHIFT REGISTOR
EFM DEMODULATOR
GFS
FSW
MON
MDP
MDS
LOCK
CLV SERVO CONTROL
FROME SYNC DETECTOR/ PROTECTOR/INSERTER
ERROR DETECTOR/ CORRECTOR
VCO OUT
VCO IN
VCO CIRCUIT TIMING GENERATOR
INTERPOLATOR
X1 16.9344 MHz
X' TAL OUT
X' TAL IN
X' TAL CIRCUIT TIMING GENERATOR
DIGITAL FILTER
SELECTOR
BCLK
DATA
LRCK
DIGITAL OUT
TR16 H:ON
OSC STOP1
CN IN
TRACKING COUNTER
CPU INTERFACE
RAM
DATA
CLK
XLT
DATA
SENS
IC1 M38002M4-126SP
(SYSTEM CONTROL MI-COM)
SQCK
SUBQ
CRCF
EMP
SCOR
IC8
BUS OUT
MUTE G
IC8
BUS CLK
BUS IN
RST
CLK
XLT
DATA
X RST
SPEED 3
SPEED 2
SPEED 1
MOTOR 4
MOTOR 3
MOTOR 2
MOTOR 1
FOK
LD-ON
TR10
RESET PLUSE GENERATOR
SENS
F.SKIP
B.SKIP
O/C 1
O/C 2
DISC 3
DISC 2
DISC 1
STOP
PLAY/PAUSE
O/C 3
TS201
TS202
TS203
TS204
TS205
TS206
TS207
TS208
TS209
TS210
FORWARD SKIP
BACK SKIP
OPEN/CLOSE-1
OPEN/CLOSE-2
DISC 3
DISC 2
DISC 1
STOP
PLAY/PAUSE
OPEN/CLOSE-3
LED 1
LED 2
LED 3
TR11~13
LED DRIVE
D203
D202
D201
DISC 1
DISC 2
DISC 3
FRONT PCB
OPEN SW
CLOSE SW
CLAMP SW
TABLE SW 1
TABLE SW 2
SLED IN SW
SLED IN SW
SPINDLE MOTOR
SLED MOTOR
KSM-2101ABM
(MECHA BLK)
CLAMP
CLOSE
OPEN
LOADING MOTOR
TABLE SW1
TABLE SW2
TABLE MOTOR
YMC-02
(MECHA BLK)
IC10
BA6109
(OPEN/CLOSE MOTOR DRIVER)
MOTOR 4
MOTOR 3
F IN
R IN
PRE
LOGIC
DRIVER
V OUT
V OUT
IC9
BA6209N
(TABLE MOTOR DRIVER)
MOTOR 1
MOTOR 2
F IN
R IN
PRE
LOGIC
DRIVER
V OUT
V OUT
D16~18
D15
SPEED1~3
TR29~31
H:ON
IC2
CXA1082BS
(SERVO CONTROL)
GFS
TR8 H:ON
PLL
PD1
BW
GND
CLK
XLT
DATA
XRST
DIRC
COUT
AVEE
SENS
F.SET
S.STOP
SL
SLO
SL
TTL
I²L
I²L
TTL
LOOP FILTER
V→I
ADDRESS DECODER
SHIFT REGISTER
DECODER
TM1to7
PS1to3
TRACKING PHASE COMPENSATION
TM6
TM5
TM4
TM3
TM7
TM2
FS1
TG2
SLED MOTOR DRIVE
TR25/26
TGU
TG2
AVCC
TAO
TA
23/24
NG COIL
RIVE
MAIN PCB
SIGNAL LINE

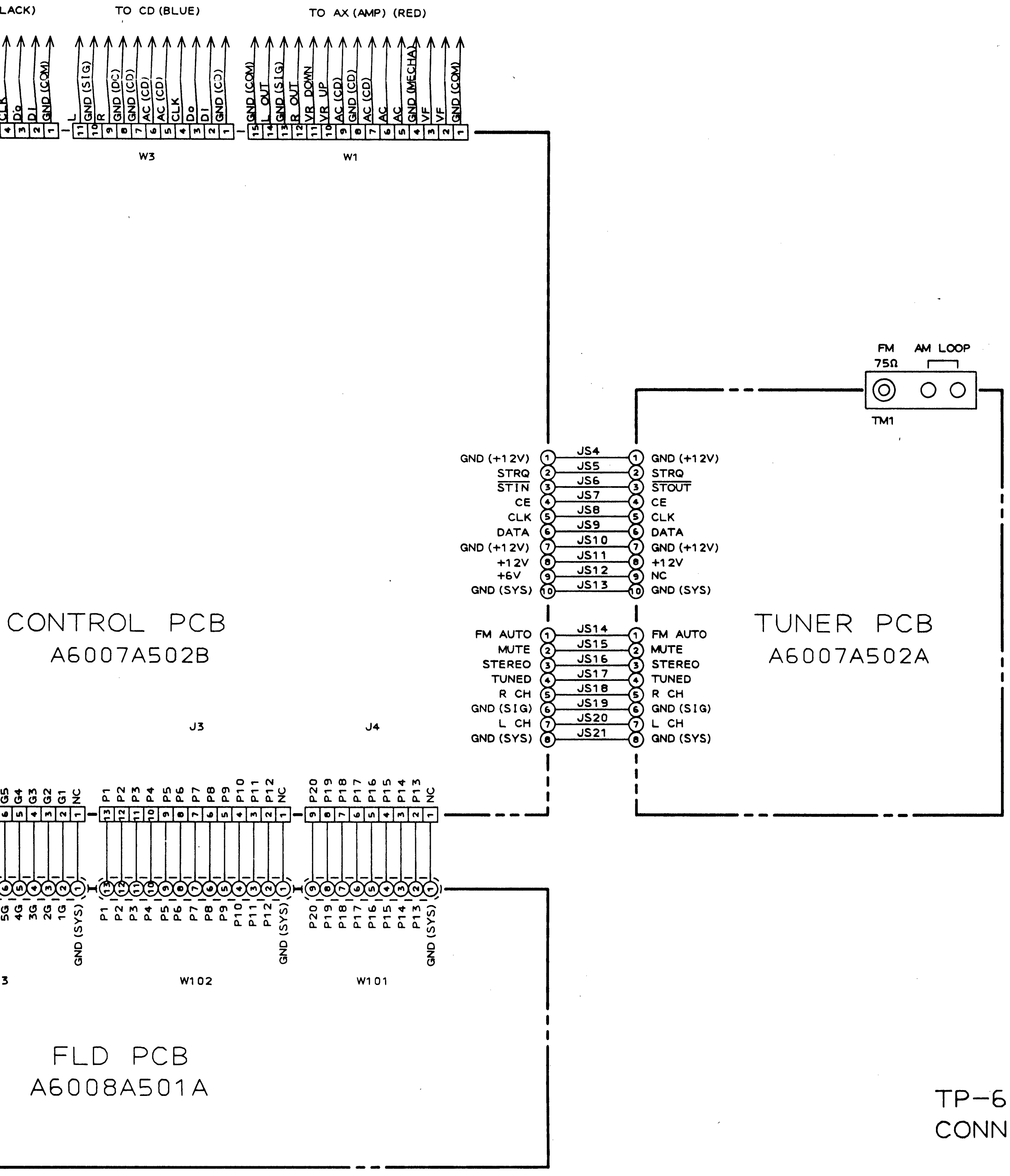
CD-670
BLOCK DIAGRAM
NO.3-3 P207151M
A1


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO AX (DECK) (BLACK)
TO CD (BLUE)
TO AX (AMP)
VCR/DAT
PHONO REC PLAY
R L R L R L
J11
L (REC)
L (PLAY)
GND (DC)
R (PLAY)
R (REC)
GND (DC)
GND (COM)
GND (MECHA)
AC
AC
CLK
Do
DI
GND (COM)
W2
GND (SIG)
R
GND (DC)
GND (CD)
AC (CD)
AC (CD)
CLK
Do
DI
GND (CD)
W3
GND (COM)
L OUT
GND (SIG)
R OUT
VR DOWN
VR UP
AC (CD)
GND (CD)
AC (CD)
AC
W1
CONTROL PCB
A6007A502B
AC IN
AC OUT
AC OUT
AC IN
−12V CTL
GND
+12V CTL
CD POWER
UNR 20V
GND
W1
SUB PCB
A6011A5010
V ONLY
J6
+12V
GND (DC)
−12V
L ON
L OFF
GND (SIG)
R OFF
R ON
GND (SIG)
W5
J1
REMOCON
GND (SYS)
DC5.6V
S.B LED
VP
VF
VF
W1
J2
K1
K0
G10
G9
G8
G7
G6
G5
G4
G3
G2
G1
NC
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
GND (SYS)
W2
J3
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
W3
FLD-TONE PCB
A6007A5010
TO AX (DECK) (BLACK)
TO CD (BLUE)
TO AX
L (REC)
L (PLAY)
GND (DC)
R (PLAY)
R (REC)
GND (DC)
GND (A)
GND (MECHA)
AC (A)
AC (A)
CLK
Do
DI
GND (COM)
W2
GND (SIG)
R
GND (DC)
GND (DC)
AC (CD)
AC (CD)
CLK
Do
DI
GND (CD)
W3
GND (COM)
L OUT
GND (SIG)
R OUT
VR DOWN
VR UP
AC (CD)
V ONLY
VCR/DAT
PHONO REC PLAY
R L R L R L
J11
W1
SUB PCB
A6011A5010
GND
UNR 20V
CD POWER
+12V CTL
GND
−12V CTL
AC IN
AC OUT
AC OUT
AC IN
W3
+5V CTL
+12V CTL
GND
−12V CTL
J202
+5V CTL
+12V CTL
GND
−12V CTL
W201
J5
GND (A)
BUS (DI)
BUS (Do)
BUS (CLK)
AC (VF)
AC (VF)
Vp
AC (A)
AC (A)
GND (A)
R-GEQ OFF
R-GEQ ON
GND (SIG)
L-GEQ ON
L-GEQ OFF
CONTROL PCB
A6007A502B
GEQ PCB
A6008A501B
J1
J2
J3
REMOCON
GND (SYS)
DC5.6V
S.B LED
VP
VF
VF
K1
K0
G10
G9
G8
G7
G6
G5
G4
G3
G2
G1
NC
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
NC
P20
P19
P18
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
GND (SYS)
W104
W103
W102
J201
W105
VDD
GND (SYS)
YCOM
XCOM
B
A
MUTE
CLK
DI
DO
VF
VF
BUS (CLK)
BUS (DI)
BUS (Do)
FLD PCB
A6008A501A

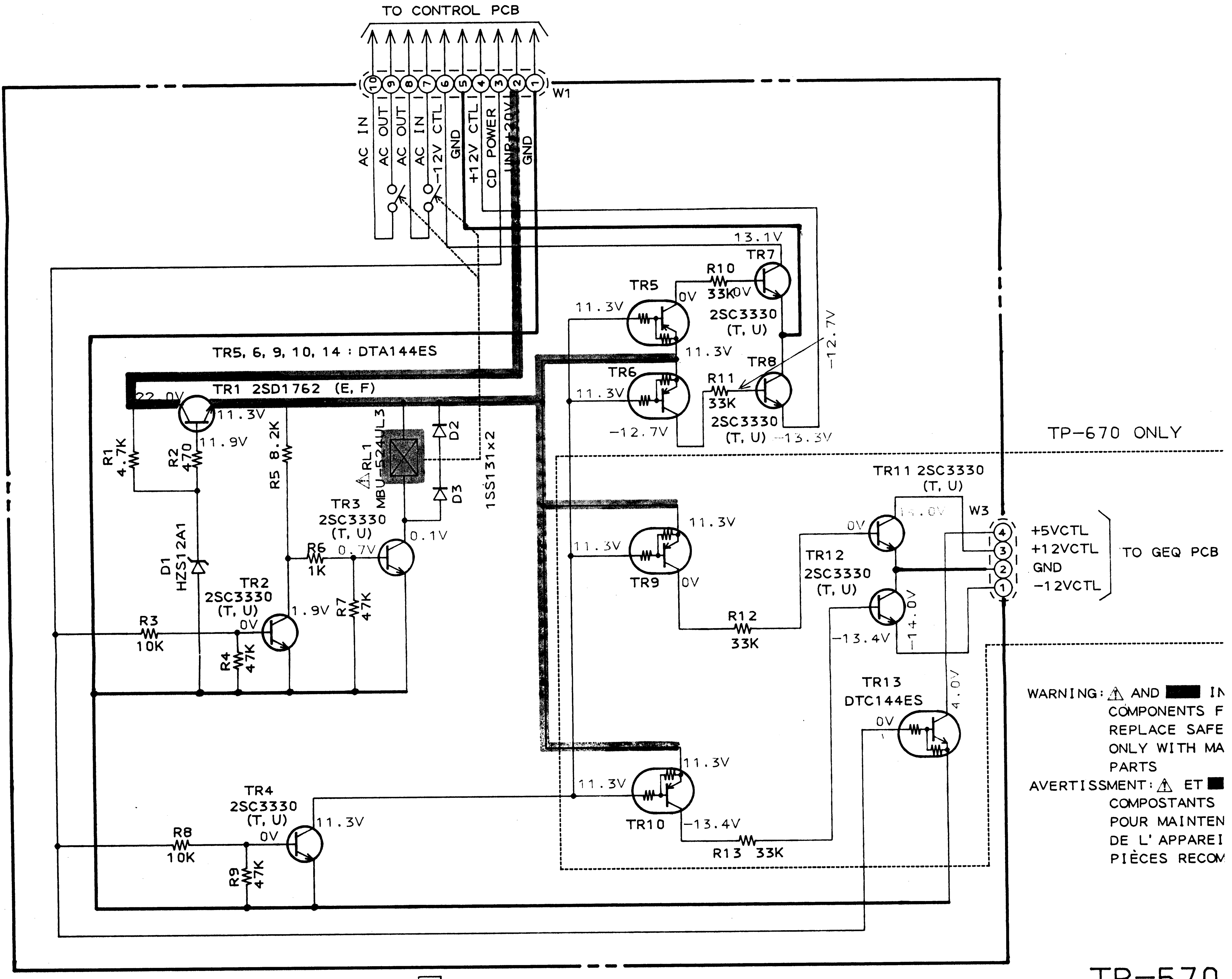
6


TO CD (BLUE)
TO AX (AMP) (RED)
GND (SIG)
R
GND (DC)
GND (CD)
AC (CD)
AC (CD)
CLK
Do
DI
GND (CD)
GND (COM)
L OUT
GND (SIG)
R OUT
VR DOWN
VR UP
AC (CD)
GND (CD)
AC (CD)
AC
AC
GND (MECHA)
VF
VF
GND (COM)
W3
W1
FM 75Ω
AM LOOP
TM1
GND (+12V)
STRQ
STIN
CE
CLK
DATA
GND (+12V)
+12V
+6V
GND (SYS)
JS4
JS5
JS6
JS7
JS8
JS9
JS10
JS11
JS12
JS13
GND (+12V)
STRQ
STOUT
CE
CLK
DATA
GND (+12V)
+12V
NC
GND (SYS)
OL PCB
7A502B
TUNER PCB
A6007A502A
FM AUTO
MUTE
STEREO
TUNED
R CH
GND (SIG)
L CH
GND (SYS)
JS14
JS15
JS16
JS17
JS18
JS19
JS20
JS21
J2
J3
J4
K0 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1 NC
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 NC
P20 P19 P18 P17 P16 P15 P14 P13 NC
K0 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G GND (SYS)
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 GND (SYS)
P20 P19 P18 P17 P16 P15 P14 P13 GND (SYS)
W2
W3
W4
FLD-TONE PCB
A6007A5010

TP-570
CONNECTION DIAGRAM
NO.12-1 A601101M
A2


LACK)
TO CD (BLUE)
TO AX (AMP) (RED)
CLK
Do
DI
GND (COM)
GND (SIG)
R
GND (DC)
GND (CD)
AC (CD)
AC (CD)
CLK
Do
DI
GND (CD)
GND (COM)
L OUT
GND (SIG)
R OUT
VR DOWN
VR UP
AC (CD)
GND (CD)
AC (CD)
AC
AC
GND (MECHA)
VF
VF
GND (COM)
W3
W1
FM 75Ω
AM LOOP
TM1
GND (+12V)
STRQ
STIN
CE
CLK
DATA
GND (+12V)
+12V
+6V
GND (SYS)
JS4
JS5
JS6
JS7
JS8
JS9
JS10
JS11
JS12
JS13
GND (+12V)
STRQ
STOUT
CE
CLK
DATA
GND (+12V)
+12V
NC
GND (SYS)
CONTROL PCB
A6007A502B
TUNER PCB
A6007A502A
FM AUTO
MUTE
STEREO
TUNED
R CH
GND (SIG)
L CH
GND (SYS)
JS14
JS15
JS16
JS17
JS18
JS19
JS20
JS21
J3
J4
G5 G4 G3 G2 G1 NC
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 NC
P20 P19 P18 P17 P16 P15 P14 P13 NC
5G 4G 3G 2G 1G GND (SYS)
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 GND (SYS)
P20 P19 P18 P17 P16 P15 P14 P13 GND (SYS)
W102
W101
FLD PCB
A6008A501A

TP-670
CONNECTION DIAGRAM
NO.12-2 A601102M
A2


TO CONTROL PCB
W1
10 AC IN
9 AC OUT
8 AC OUT
7 AC IN
6 -12V CTL
5 GND
4 +12V CTL
3 CD POWER
2 UNR+20V
1 GND
TR5, 6, 9, 10, 14 : DTA144ES
TR1 2SD1762 (E, F)
22.0V
11.3V
11.9V
R1 4.7K
R2 470
R5 8.2K
D1 HZS12A1
⚠RL1 MBU-S24UL3
D2
D3
1SS131x2
TR3 2SC3330 (T, U)
0.1V
R6 1K
0.7V
R7 47K
TR2 2SC3330 (T, U)
1.9V
0V
R3 10K
R4 47K
TR4 2SC3330 (T, U)
11.3V
0V
R8 10K
R9 47K
13.1V
TR7
R10 33K
0V
TR5
11.3V
2SC3330 (T, U)
11.3V
TR6
TR8
R11 33K
-12.7V
2SC3330 (T, U)
-13.3V
-12.7V
TP-670 ONLY
TR11 2SC3330 (T, U)
14.0V
W3
TR9
11.3V
0V
TR12 2SC3330 (T, U)
R12 33K
-13.4V
-14.0V
④ +5VCTL
③ +12VCTL
② GND
① -12VCTL
TO GEQ PCB
TR13 DTC144ES
4.0V
TR10
-13.4V
R13 33K

WARNING: ⚠ AND ■ IN
COMPONENTS F
REPLACE SAFE
ONLY WITH MA
PARTS

AVERTISSMENT: ⚠ ET ■
COMPOSTANTS
POUR MAINTEN
DE L' APPAREI
PIÈCES RECOM

SUB PCB A6011A5010 (☑ ONLY)

INDICATED VOLTAGES WERE
MEASURED DURING FM STEREO MODE

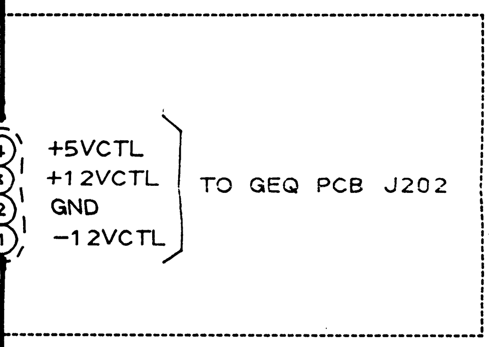
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV

TP-570,
SUB
SCHEMA

NO.1

7

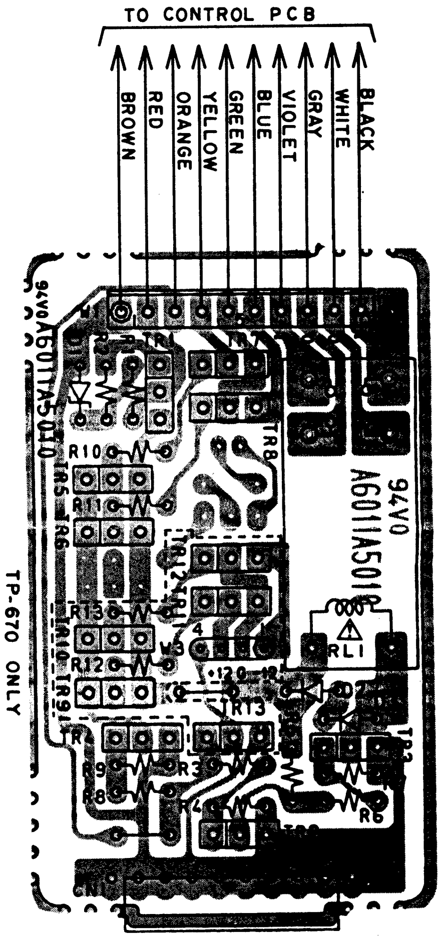
TP−670 ONLY


+5VCTL
+12VCTL
GND
−12VCTL
TO GEQ PCB J202

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ■ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

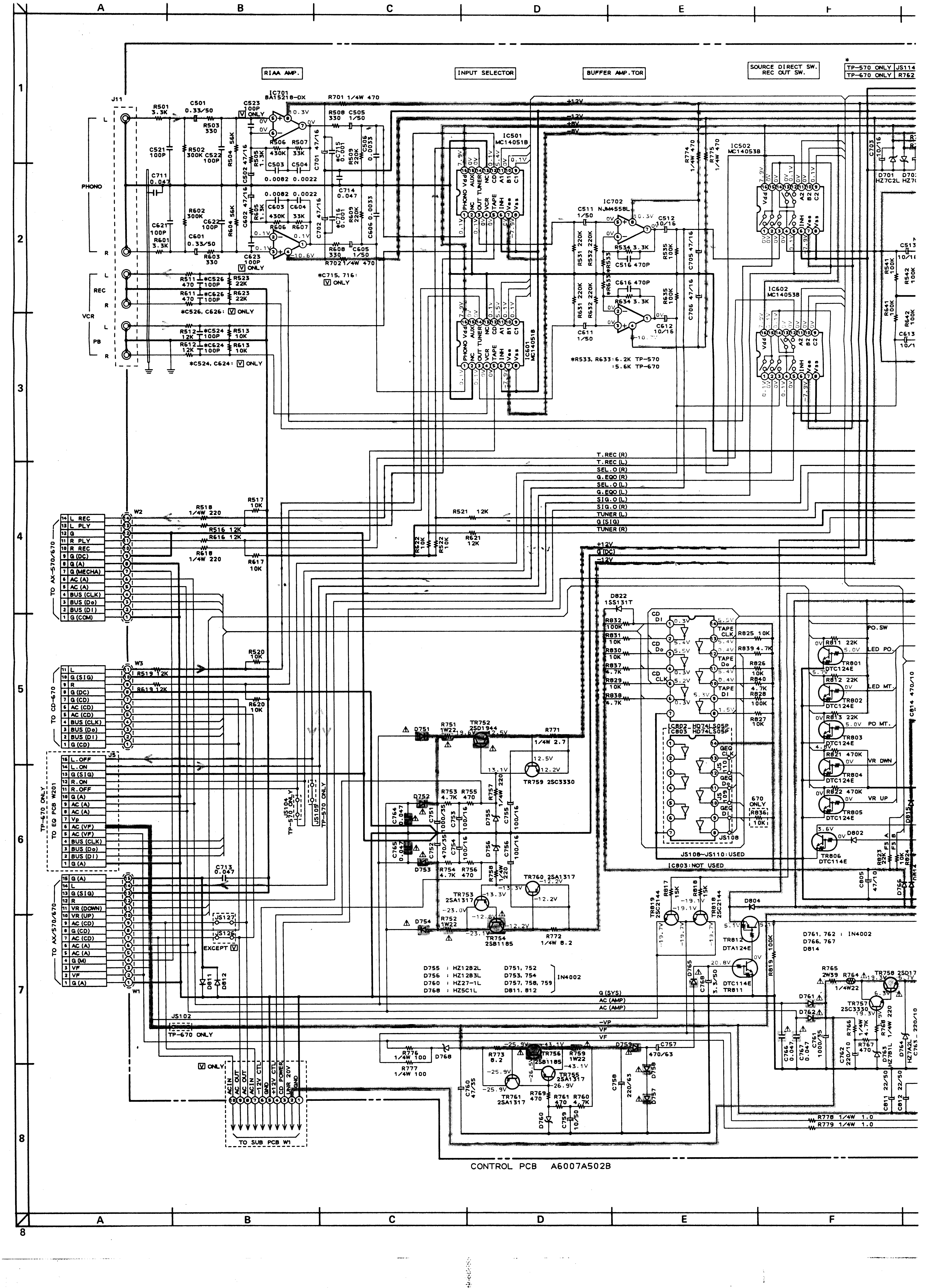
TP−570/670
SUB
SCHEMATIC DIAGRAM
NO.12−3 A601103M
A3


TO CONTROL PCB
BROWN
RED
ORANGE
YELLOW
GREEN
BLUE
VIOLET
GRAY
WHITE
BLACK
94V0
A6011A5010
TP-670 ONLY
R10
R5
R11
R6
R13
R12
R9
R8
R3
R4
R7
R6
TR8
TR1
TR2
TR3
RL1

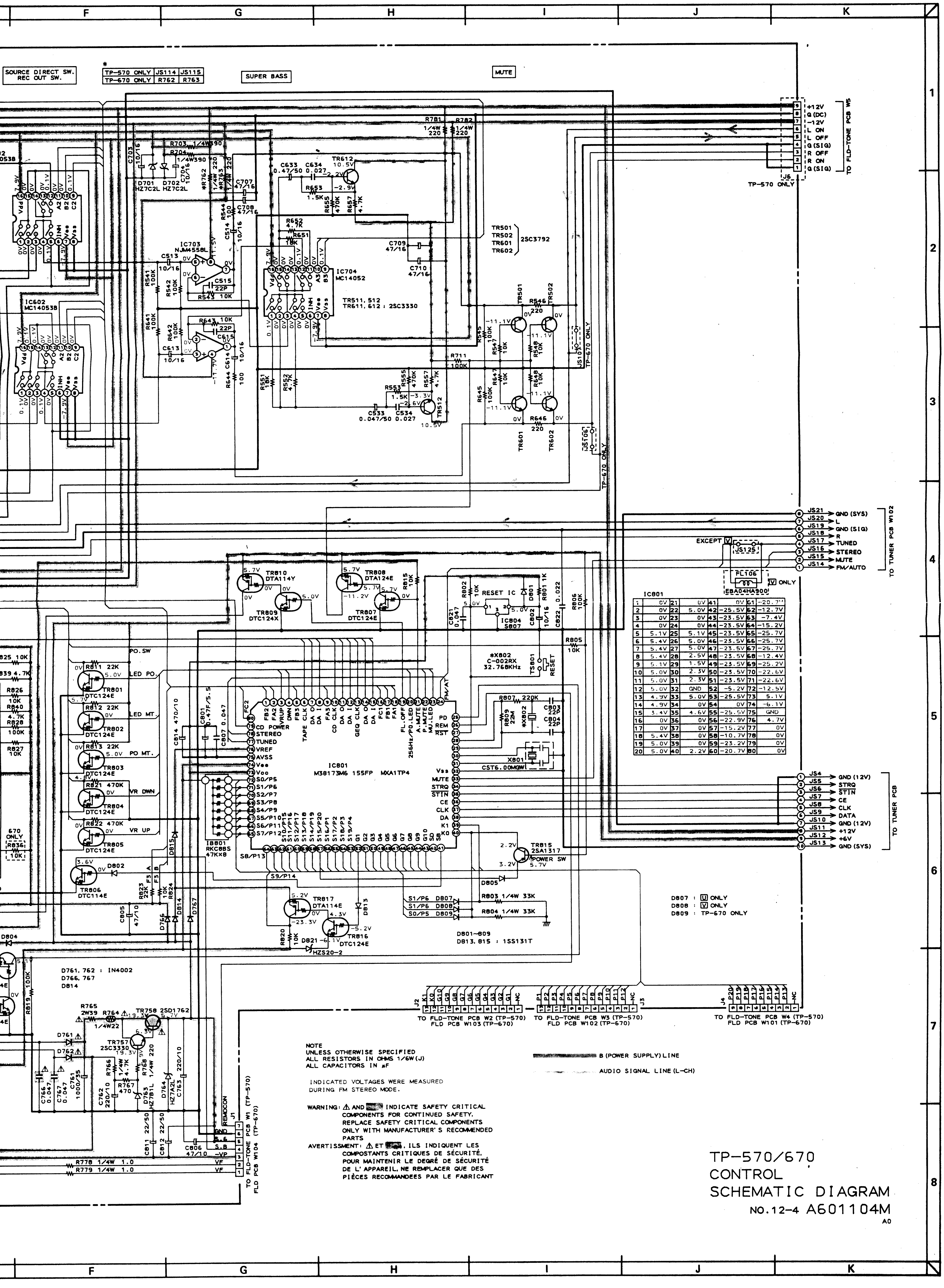
SUB PCB A6011A5010 (V ONLY)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


RIAA AMP.
INPUT SELECTOR
BUFFER AMP.TOR
SOURCE DIRECT SW.
REC OUT SW.
TP-570 ONLY JS114
TP-670 ONLY R762
J11
PHONO
L
R
REC
VCR
PB
IC701 BA15218-DX
R701 1/4W 470
R702 1/4W 470
IC501 MC14051B
IC601 MC14051B
IC502 MC14053B
IC602 MC14053B
IC702 NJM4558L
+12V
-12V
+8V
-8V
*C715, 716: V ONLY
*C526, C626: V ONLY
*C524, C624: V ONLY
*R533, R633: 6.2K TP-570
:5.6K TP-670
T.REC (R)
T.REC (L)
SEL.O (R)
G.EQO (R)
SEL.O (L)
G.EQO (L)
SIG.O (L)
SIG.O (R)
TUNER (L)
G (SIG)
TUNER (R)
G (DC)
W2
TO AX-570/670
L REC
L PLY
G
R PLY
R REC
G (DC)
G (A)
G (MECHA)
AC (A)
BUS (CLK)
BUS (Do)
BUS (DI)
G (COM)
W3
TO CD-670
L
G (SIG)
R
G (CD)
AC (CD)
J5
TP-670 ONLY
TO EQ PCB W201
L.OFF
L.ON
R.ON
R.OFF
Vp
AC (VF)
W1
TO AX/570/670
VR (DOWN)
VR (UP)
G (M)
VF
JS104 TP-570 ONLY
JS105 TP-570 ONLY
JS127
JS126
EXCEPT V
JS102
TP-670 ONLY
V ONLY
AC IN
AC OUT
-12V CTL
GND
+12V CTL
CD POWER
UNR 20V
TO SUB PCB W1
D822 1SS131T
CD DI
CD Do
CD CLK
TAPE CLK
TAPE Do
TAPE DI
GEQ CLK
GEQ Do
GEQ DI
IC802 HD74LS05P
IC803 HD74LS05P
JS108
JS108-JS110: USED
IC803: NOT USED
670 ONLY R836 10K
TR752 2SD1944
TR759 2SC3330
TR760 2SA1317
TR753 2SA1317
TR754 2SB1185
TR756 2SB1185
TR755 2SA1317
TR761 2SA1317
TR819 2SC2144
TR818 2SC2144
TR812 DTA124E
TR811 DTC114E
TR801 DTC124E
TR802 DTC124E
TR803 DTC124E
TR804 DTC124E
TR805 DTC124E
TR806 DTC114E
TR757 2SC3330
TR758 2SD17
PO.SW
LED PO.
LED MT.
PO MT.
VR DWN
VR UP
D755 : HZ12B2L
D756 : HZ12B3L
D760 : HZ27-1L
D768 : HZ5C1L
D751, 752
D753, 754
D757, 758, 759
D811, 812
IN4002
D761, 762 : IN4002
D766, 767
D814
D701 HZ7C2L
G (SYS)
AC (AMP)
-VP
VF
R778 1/4W 1.0
R779 1/4W 1.0
A
B
C
D
E
F
1
2
3
4
5
6
7
8

CONTROL PCB A6007A502B


F
G
H
I
J
K
1
2
3
4
5
6
7
8
SOURCE DIRECT SW.
REC OUT SW.
*
TP-570 ONLY JS114 JS115
TP-670 ONLY R762 R763
SUPER BASS
MUTE
+12V
G (DC)
−12V
L ON
L OFF
G (SIG)
R OFF
R ON
G (SIG)
J5
TP-570 ONLY
TO FLD-TONE PCB W5
IC703
NJM4558L
IC704
MC14052
IC602
MC14053B
D701 HZ7C2L
D702 HZ7C2L
TR612
TR501
TR502
TR601
TR602
2SC3792
TR511, 512
TR611, 612 : 2SC3330
JS107 TP-670 ONLY
JS106 TP-670 ONLY
JS21 GND (SYS)
JS20 L
JS19 GND (SIG)
JS18 R
JS17 TUNED
JS16 STEREO
JS15 MUTE
JS14 FM/AUTO
EXCEPT V
JS125
FL106
EBA04HA900
V ONLY
TO TUNER PCB W102
TR810 DTA114Y
TR809 DTC124X
TR808 DTA124E
TR807 DTC124E
RESET IC
IC804 S807
*X802 C-002RX 32.768KHz
TS801 RESET
X801 CST6.00MGW
IC801
M38173M6 155FP MXA1TP4
IB801 RKC8BS 47K×8
TR801 DTC124E
TR802 DTC124E
TR803 DTC124E
TR804 DTC124E
TR805 DTC124E
TR806 DTC114E
PO. SW
LED PO.
LED MT.
PO MT.
VR DWN
VR UP
670 ONLY
R836
TR815 2SA1317
POWER SW
TR817 DTA114E
TR816 DTC124E
D821 HZS20-2
D807 : U ONLY
D808 : V ONLY
D809 : TP-670 ONLY
D801~809
D813, 815 : 1SS131T
S1/P6 D807
S1/P6 D808
S0/P5 D809
R803 1/4W 33K
R804 1/4W 33K
JS4 GND (12V)
JS5 STRQ
JS6 STIN
JS7 CE
JS8 CLK
JS9 DATA
JS10 GND (12V)
JS11 +12V
JS12 +6V
JS13 GND (SYS)
TO TUNER PCB
D761, 762 : IN4002
D766, 767
D814
R765 2W39
R764 1/4W22
TR758 2SD1762
TR757 2SC3330
D763 HZ7B1L
D764 HZ7A2L
J1 REMOCON
GND
S.G
S.B
−VP
VF
VF
R778 1/4W 1.0
R779 1/4W 1.0
TO FLD-TONE PCB W1 (TP-570)
FLD PCB W104 (TP-670)
J2 K1 K0 G10 G9 G8 G7 G6 G5 G4 G3 G2 G1 NC
TO FLD-TONE PCB W2 (TP-570)
FLD PCB W103 (TP-670)
J3 P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 NC
TO FLD-TONE PCB W3 (TP-570)
FLD PCB W102 (TP-670)
J4 P20 P19 P18 P17 P16 P15 P14 P13 NC
TO FLD-TONE PCB W4 (TP-570)
FLD PCB W101 (TP-670)

IC801

1	0V	21	0V	41	0V	61	−20.7V
2	0V	22	5.0V	42	−25.5V	62	−12.7V
3	0V	23	0V	43	−23.5V	63	−7.4V
4	0V	24	0V	44	−23.5V	64	−15.2V
5	5.1V	25	5.1V	45	−23.5V	65	−25.7V
6	5.4V	26	5.0V	46	−23.5V	66	−25.7V
7	5.4V	27	5.0V	47	−23.5V	67	−25.7V
8	5.4V	28	2.5V	48	−23.5V	68	−12.4V
9	5.1V	29	1.5V	49	−23.5V	69	−25.2V
10	5.0V	30	2.3V	50	−23.5V	70	−22.6V
11	5.0V	31	2.3V	51	−23.5V	71	−22.6V
12	5.0V	32	GND	52	−5.2V	72	−12.5V
13	4.9V	33	5.0V	53	−25.5V	73	5.1V
14	4.9V	34	0V	54	0V	74	−6.1V
15	3.4V	35	4.6V	55	−25.5V	75	GND
16	0V	36	0V	56	−22.9V	76	4.7V
17	0V	37	0V	57	−15.2V	77	0V
18	5.4V	38	0V	58	−10.7V	78	0V
19	5.0V	39	0V	59	−23.2V	79	0V
20	5.0V	40	2.2V	60	−20.7V	80	0V

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF

INDICATED VOLTAGES WERE MEASURED
DURING FM STEREO MODE.

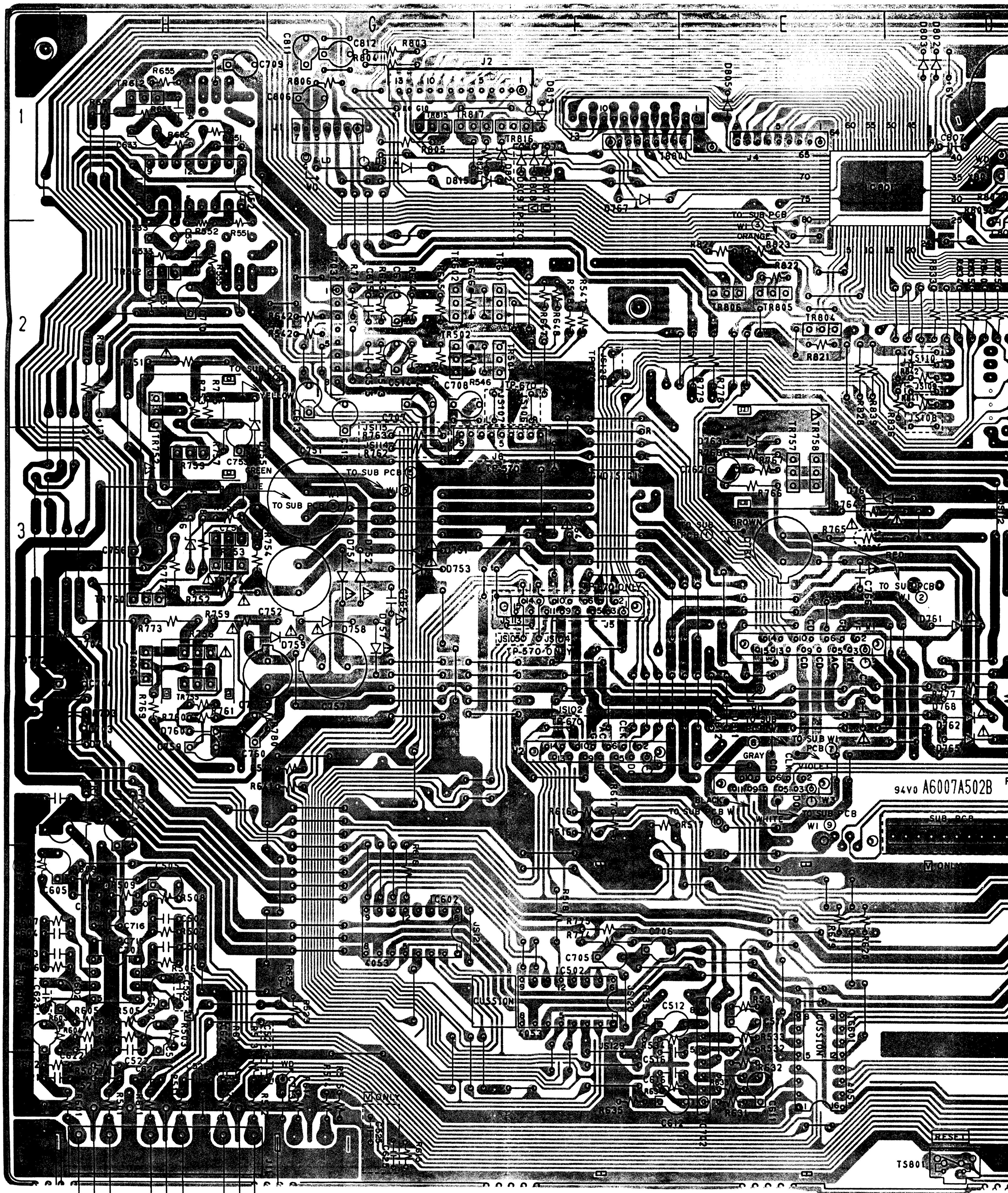
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL
COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED
PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES
COMPOSTANTS CRITIQUES DE SÉCURITÉ,
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
DE L'APPAREIL, NE REMPLACER QUE DES
PIÈCES RECOMMANDEES PAR LE FABRICANT

▬ B (POWER SUPPLY) LINE

▬ AUDIO SIGNAL LINE (L-CH)

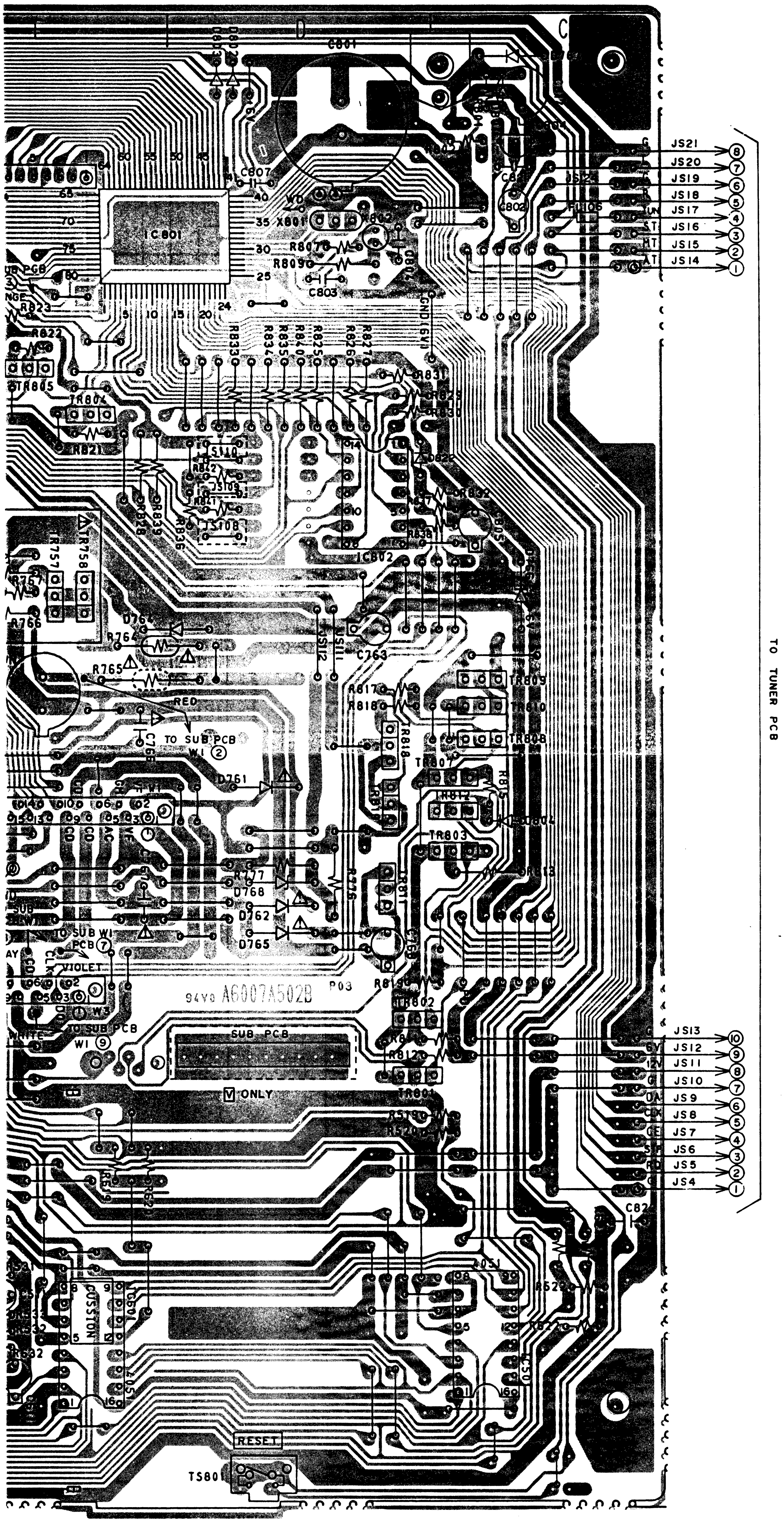
TP-570/670
CONTROL
SCHEMATIC DIAGRAM
NO.12-4 A601104M
A0


G
F
E
D
1
2
3
J2
J4
J5
J6
IC801
TS801
RESET
94V0 A6007A502B
SUB PCB
TO SUB PCB
W1
ORANGE
YELLOW
GREEN
BLUE
BROWN
RED
GRAY
VIOLET
BLACK
WHITE
P-570 ONLY
V ONLY
IC602
IC502
C752
D753
D758
D759
D761
R773
R759
R765
TR805
TR806
TR804
R821
R822
R823
R824
R
L
R
L
R
L
PHONE
REC
PB
VCR

CONTROL PCB A6007A502BJ2

NOTE : PARTS DIFFE
REFER TO SC
PARTS INFOR

WARNING: ⚠INDICATES SA
REPLACE SAFETY
RECOMMENDED
AVERTISSEMENT: ⚠IL INDIC
POUR MAINTENIR
NE REMPLACER


TO TUNER PCB
JS21
JS20
JS19
JS18
JS17
JS16
JS15
JS14
JS13
JS12
JS11
JS10
JS9
JS8
JS7
JS6
JS5
JS4
IC801
IC802
X801
C801
C807
C803
TR801
TR802
TR803
TR804
TR805
TR807
TR808
TR809
TR810
TR812
SUB PCB
V ONLY
RESET
TS801
94V0 A6007A502B
RED
VIOLET
WHITE
TO SUB PCB W1 ②

502BJ2

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTAINING PARTS INFORMATION.

PRINCIPAL PARTS LOCATION

ICs

IC501	C5,6
IC502	F5
IC601	E5,6
IC602	G5
IC701	H5
IC702	E5,6
IC703	G2
IC704	H1
IC801	D,E1
IC802	D2,3
IC804	C1

TRANSISTORs

TR501	F2
TR502	G2
TR512	H2
TR601	F2
TR602	G2
TR612	H1
TR752	H2
TR753	H3
TR754	H3
TR755	H4
TR756	H4
TR757	E3
TR758	E3
TR759	H3
TR760	H3
TR761	H4
TR801	D5
TR802	D4
TR803	C4
TR804	E2
TR805	E2
TR806	E2
TR807	C3
TR808	C3
TR809	C3
TR810	C3
TR811	D4
TR812	C4
TR815	G1
TR816	F1
TR817	F,G1
TR818	D3
TR819	D3,4

CONNECTORs

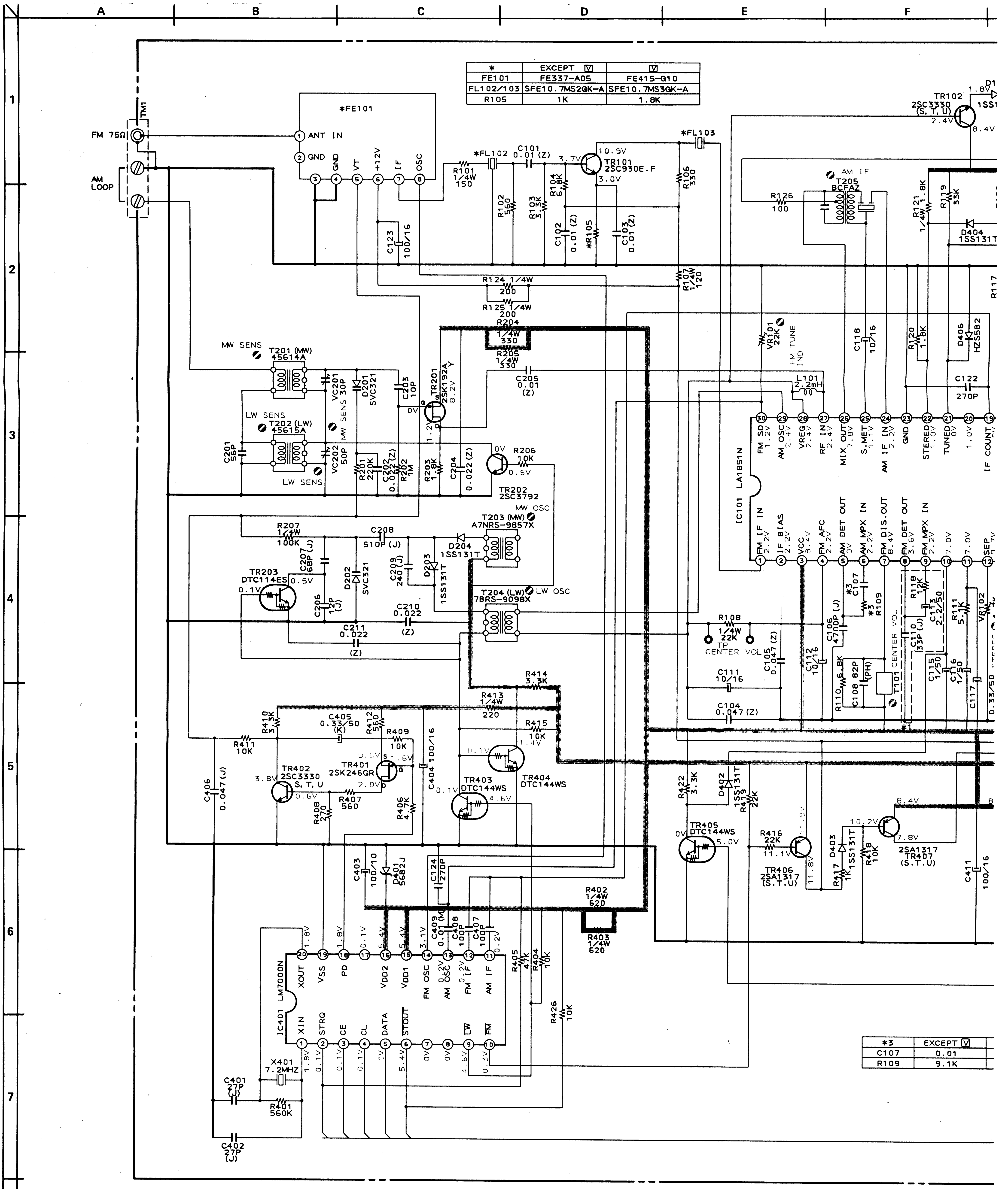
J1	G1
J2	F,G1
J3	F1
J4	E1
J5	F3
J6	F,G3
J11	G,H6

WIREs

W1	E3,4
W2	F4
W3	E4

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



A
B
C
D
E
F
1
2
3
4
5
6
7
8
10
TM1
FM 75Ω
AM LOOP
*FE101
ANT IN
GND
VT
+12V
IF
OSC
*FL102
C101 0.01 (Z)
R101 1/4W 150
TR101 2SC930E.F
10.9V
3.7V
3.0V
*FL103
R102 560
R103 3.3K
R104 6.8K
C102 0.01 (Z)
*R105
C103 0.01 (Z)
R106 330
R107 1/4W 120
C123 100/16
R124 1/4W 200
R125 1/4W 200
R204 1/4W 330
R205 1/4W 330
C205 0.01 (Z)
MW SENS
T201 (MW) 45614A
LW SENS
T202 (LW) 45615A
C201 56P
VC201 MW SENS 30P
VC202 50P
D201 SVC321
C203 10P
TR201 2SK192A Y
8.2V
0V
1.2V
R201 220K
C202 0.022 (Z)
R202 1M
R203 1.8K
C204 0.022 (Z)
TR202 2SC3792
R206 10K
0V
0.5V
MW OSC
T203 (MW) A7NRS-9857X
R207 1/4W 100K
C208 510P (J)
D204 1SS131T
C207 68P (J)
D202 SVC321
C209 240 (J)
D203 1SS131T
TR203 DTC114ES
0.5V
0.1V
C206 12P (J)
T204 (LW) 7BRS-9098X
LW OSC
C210 0.022 (Z)
C211 0.022 (Z)
R414 3.3K
R413 1/4W 220
R415 10K
C405 0.33/50 (K)
R410 3.3K
R412 560
R409 10K
R411 10K
C406 0.047 (J)
TR402 2SC3330 S, T, U
3.8V
0.6V
TR401 2SK246GR
9.5V
1.6V
2.0V
R407 560
R408 270
R406 4.7K
C404 100/16
0.1V
1.4V
TR404 DTC144WS
TR403 DTC144WS
0.1V
4.6V
C403 100/10
D401 5682J
C124 270P
C409 0.01 (M)
C408 100P
C407 100P
R402 1/4W 620
R403 1/4W 620
R405 4.7K
R404 10K
R426 10K
IC401 LM7000N
XOUT
VSS
PD
VDD2
VDD1
FM OSC
AM OSC
FM IF
AM IF
XIN
STRQ
CE
CL
DATA
STOUT
LW
FM
1.8V
0.1V
5.4V
3.1V
0.2V
0V
4.6V
0.3V
X401 7.2MHZ
C401 27P (J)
R401 560K
C402 27P (J)
TR102 2SC3330 (S, T, U)
1.8V
2.4V
8.4V
1SS1
D1
AM IF
T205 BCFAZ
R126 100
R121 1/4W 1.8K
R119 33K
D404 1SS131T
R117
VR101 22K
FM TUNE IND
C118 10/16
R120 1.8K
D406 HZS5B2
L101 2.2mH
C122 270P
FM SD
AM OSC
VREG
RF IN
MIX OUT
S.MET
AM IF IN
GND
STEREO
TUNED
IF COUNT
1.2V
2.4V
2.4V
2.4V
7.8V
1.1V
2.2V
1.0V
0V
1.0V
IC101 LA1851N
FM IF IN
IF BIAS
VCC
FM AFC
AM DET OUT
AM MPX IN
FM DIS.OUT
FM DET OUT
FM MPX IN
SEP
2.2V
2.2V
8.4V
2.2V
0V
2.2V
8.4V
3.6V
2.2V
7.0V
7.0V
*3 C107
*3 R109
R118 12K
C113 2.2/50
R111 5.1K
VR102
R108 1/4W 22K
TP CENTER VOL
C106 470P (J)
C105 0.047 (Z)
C112 10/16
C111 10/16
R110 6.8K
C108 82P
(PH)
T101
CENTER VOL
C110 33P (J)
C115 1/50
C116 1/50
C117
0.33/50
C104 0.047 (Z)
R422 3.3K
D402 1SS131T
R419 22K
TR405 DTC144WS
0V
5.0V
R416 22K
11.1V
11.9V
11.8V
TR406 2SA1317 (S.T.U)
D403 1SS131T
R417 1K
R418 10K
10.2V
7.8V
8.4V
2SA1317 TR407 (S.T.U)
C411 100/16

*	EXCEPT Ⓥ	Ⓥ
FE101	FE337-A05	FE415-G10
FL102/103	SFE10.7MS2GK-A	SFE10.7MS3GK-A
R105	1K	1.8K

*3	EXCEPT Ⓥ
C107	0.01
R109	9.1K

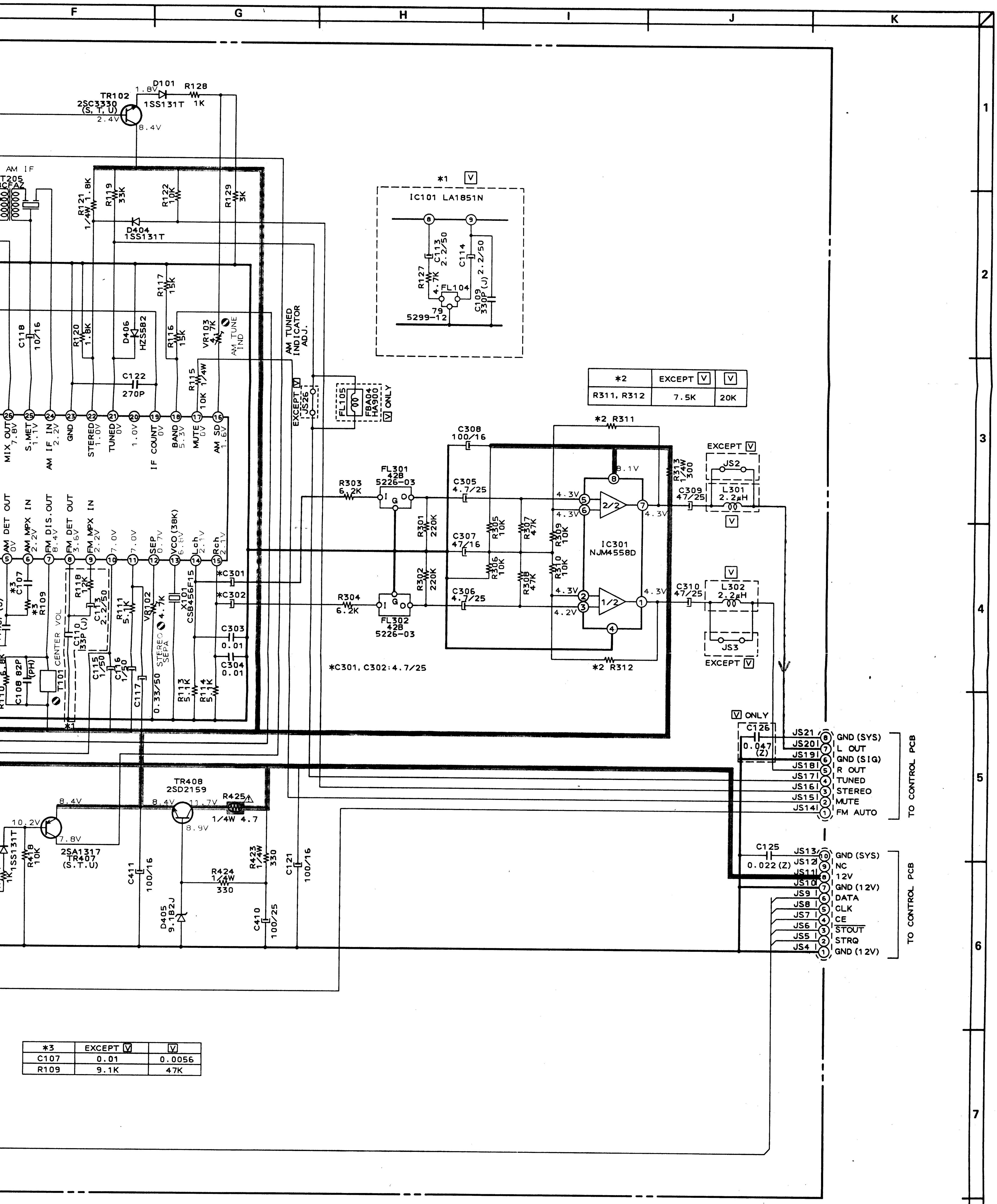
TUNER PCB A6007A502A

B (POWER SUPPLY) LINE

AUDIO SIGNAL LINE (L-CH)

WARNING: ⚠ AND ■ INDICATE SAFETY CR
COMPONENTS FOR CONTINUED SAFI
REPLACE SAFETY CRITICAL COMPC
ONLY WITH MANUFACTURER'S RECO
PARTS

AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT
COMPOSTANTS CRITIQUES DE SÉCU
POUR MAINTENIR LE DEGRÉ DE SI
DE L'APPAREIL, NE REMPLACER QU
PIÈCES RECOMMANDEES PAR LE FA


F
G
H
I
J
K
1
2
3
4
5
6
7
8
TR102
2SC3330 (S, T, U)
2.4V
8.4V
1.8V
D101
1SS131T
R128
1K
AM IF
T205
CFAZ
R121 1/4W 1.8K
R119 33K
R122 10K
R129 3K
D404 1SS131T
R117 15K
C118 10/16
R120 1.8K
D406 HZS5B2
R116 15K
VR103 4.7K
AM TUNE IND
AM TUNED INDICATOR ADJ.
C122 270P
R115 1/4W 10K
EXCEPT V JS26
FL105
FBA04 HA900
V ONLY
MIX OUT 7.8V
S.MET 1.1V
AM IF IN 2.2V
GND
STEREO 1.0V
TUNED 0V
1.0V
IF COUNT 0V
BAND 5.3V
MUTE 0V
AM SD 1.6V
AM DET OUT 0V
AM MPX IN 2.2V
FM DIS.OUT 8.4V
FM DET OUT 3.6V
FM MPX IN 2.2V
7.0V
7.0V
SEP 0.7V
VCO (38K) 6.6V
Lch 2.1V
Rch 2.1V
*3 C107
*3 R109
R118 12K
C113 2.2/50
R111 5.1K
VR102 4.7K
STEREO SEPA
X101 CSB456F15
*C301
*C302
C303 0.01
C304 0.01
CENTER VOL
C110 33P (J)
T101
C115 1/50
C116 1/50
C117 0.33/50
R113 5.1K
R114 5.1K
R110 6.8K
C108 82P (PH)
*1
*1 V
IC101 LA1851N
C113 2.2/50
C114 2.2/50
R127 4.7K
FL104
C109 330P (J)
79 5299-12
*2 R311
C308 100/16
R313 1/4W 300
EXCEPT V
JS2
L301 2.2µH
C309 47/25
V
R303 6.2K
FL301 428 5226-03
C305 4.7/25
R301 220K
R305 10K
R307 47K
R309 10K
8.1V
4.3V
4.3V
4.3V
2/2
C307 47/16
R306 10K
R308 47K
R310 10K
IC301 NJM4558D
R302 220K
R304 6.2K
FL302 428 5226-03
C306 4.7/25
4.3V
4.2V
4.3V
1/2
C310 47/25
L302 2.2µH
JS3
EXCEPT V
*2 R312
*C301, C302:4.7/25
V ONLY
C126 0.047 (Z)
JS21 GND (SYS)
JS20 L OUT
JS19 GND (SIG)
JS18 R OUT
JS17 TUNED
JS16 STEREO
JS15 MUTE
JS14 FM AUTO
TO CONTROL PCB
C125 0.022 (Z)
JS13 GND (SYS)
JS12 NC
JS11 12V
JS10 GND (12V)
JS9 DATA
JS8 CLK
JS7 CE
JS6 STOUT
JS5 STRQ
JS4 GND (12V)
TO CONTROL PCB
TR408 2SD2159
8.4V
11.7V
8.9V
R425 ⚠ 1/4W 4.7
8.4V
10.2V
7.8V
2SA1317 TR407 (S.T.U)
1SS131T
R418 10K
1K
C411 100/16
R424 1/4W 330
R423 1/4W 330
C121 100/16
D405 9.1B2J
C410 100/25

*2	EXCEPT V	V
R311, R312	7.5K	20K

*3	EXCEPT V	V
C107	0.01	0.0056
R109	9.1K	47K

⚠ AND ■ INDICATE SAFETY CRITICAL
OMPONENTS FOR CONTINUED SAFETY.
EPLACE SAFETY CRITICAL COMPONENTS
NLY WITH MANUFACTURER'S RECOMMENDED
ARTS
ENT: ⚠ ET ■, ILS INDIQUENT LES
MPOSTANTS CRITIQUES DE SÉCURITÉ.
OUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
E L'APPAREIL, NE REMPLACER QUE DES
IÈCES RECOMMANDEES PAR LE FABRICANT

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV

INDICATED VOLTAGES WERE MEASURED
DURING FM STEREO MODE.

TP-570/670
TUNER
SCHEMATIC DIAGRAM
NO.12-5 A601105M
A1

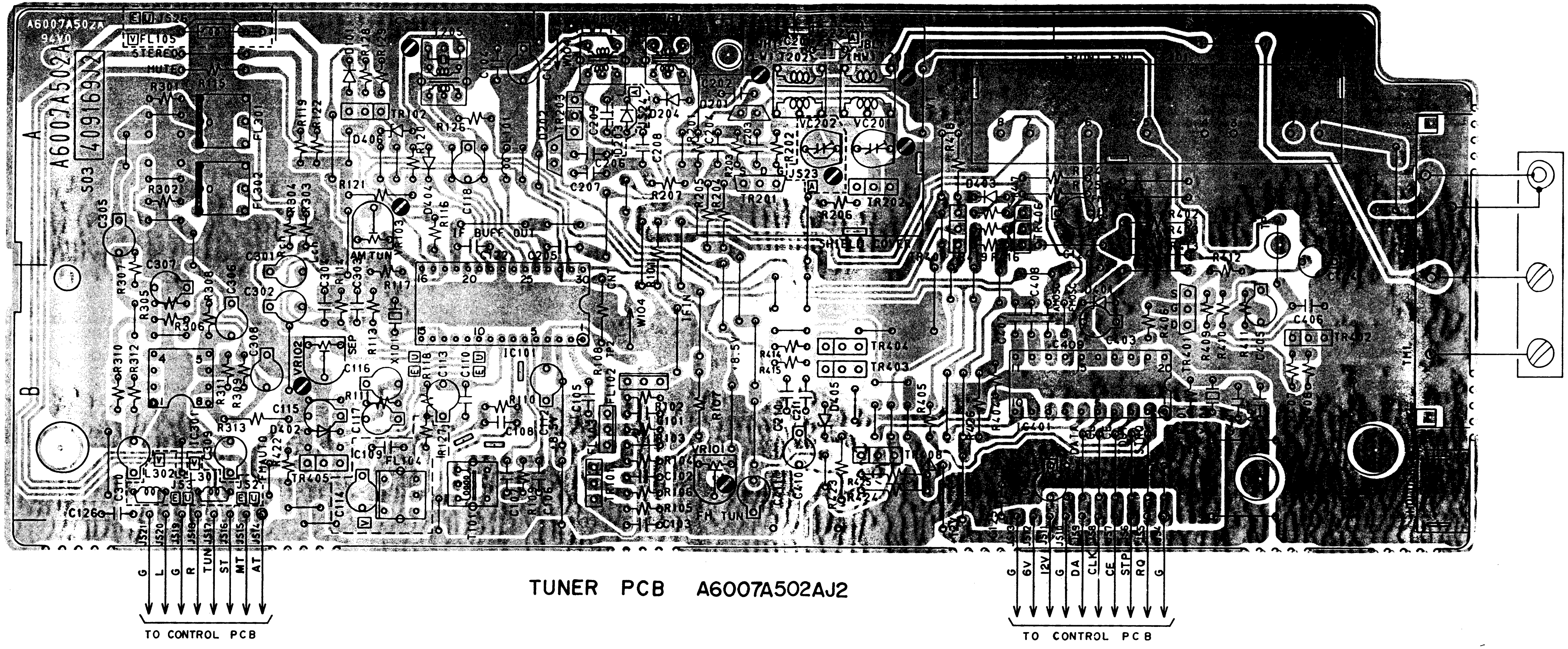
PRINCIPAL PARTS LOCATION

TRANSISTORs

TR101	B3
TR102	A2
TR201	A3
TR202	A4
TR203	A3
TR401	B5
TR402	B5,6
TR403	B4
TR404	B4
TR405	B2
TR406	A4
TR407	A4
TR408	B4

ICs

IC101	B2,3
IC301	B1
IC401	B4,5

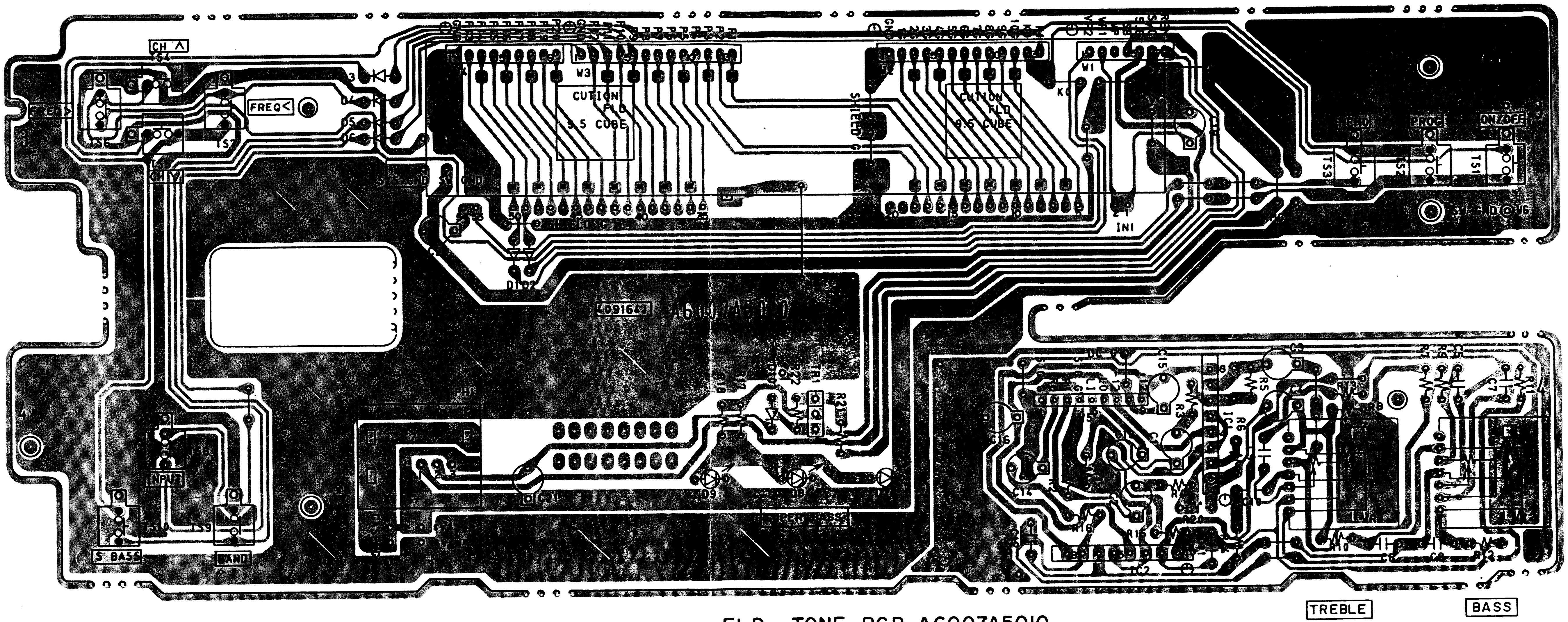

A6007A502ZA
A
B
G
L
G
R
TUN
ST
MT
AT
TO CONTROL PCB
G
6V
12V
G
DA
CLK
CE
STP
RQ
G
TO CONTROL PCB
FM75Ω
AM LOOP

TUNER PCB A6007A502AJ2

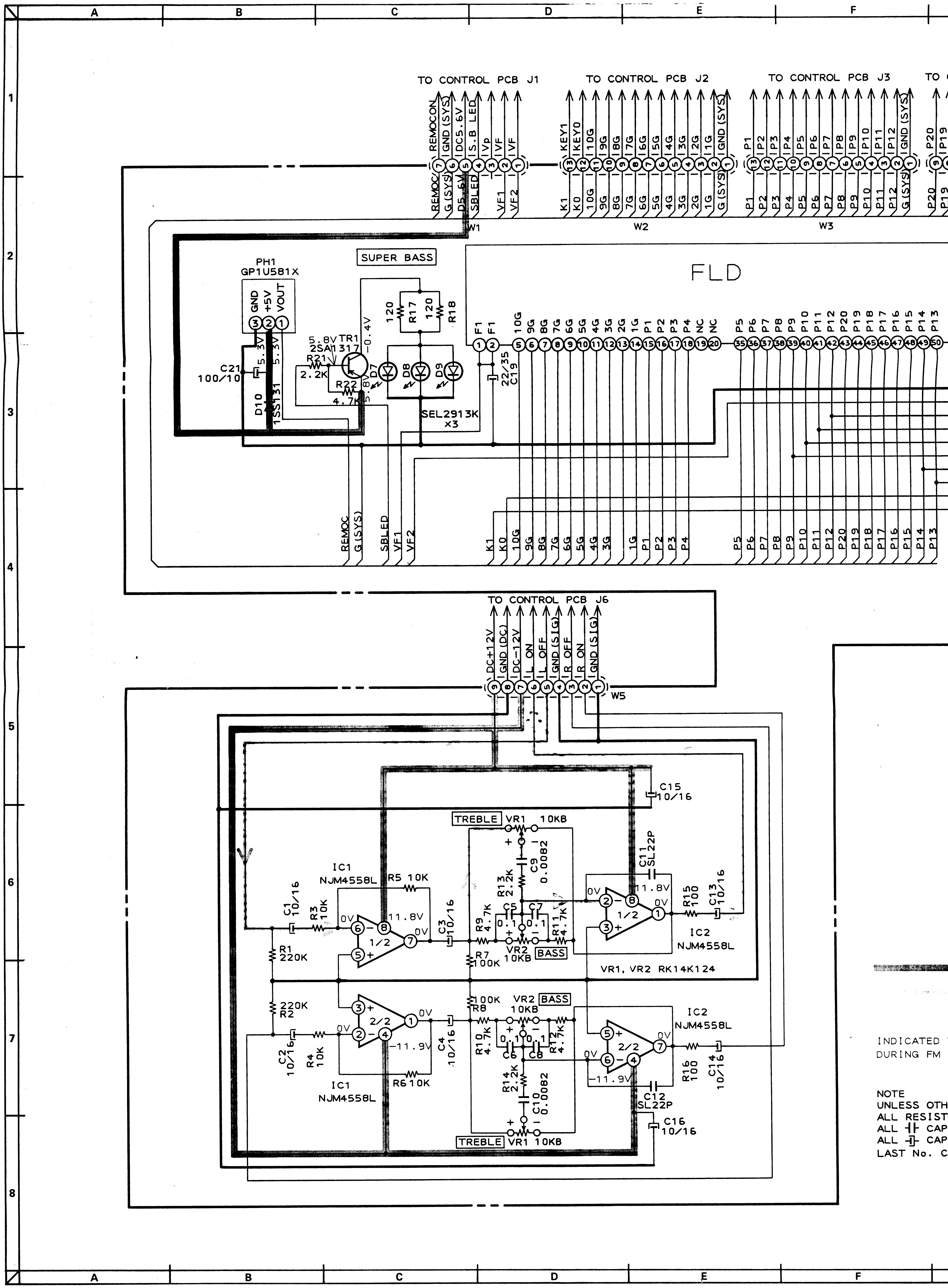
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


CH ∧
TS4
FREQ >
TS6
TS7
FREQ<
D3
D4
D5
D6
TS5
CH ∨
W3
CUTION FLD 9.5 CUBE
W1
KO
READ
PROC
ON/OFF
TS3
TS2
TS1
IN1
5V GND
D1 D2
4091647
A6007A5010
PH1
C21
D9
D8
SUPER BASS
INPUT
TS8
TS10
TS9
S BASS
BAND
IC1
IC2
C15
C12
R3
R5
R6
R16
R15
C7
C8
TREBLE
BASS

FLD - TONE PCB A6007A5010


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO CONTROL PCB J1
TO CONTROL PCB J2
TO CONTROL PCB J3
TO
REMOCON
GND (SYS)
DC5.6V
S.B LED
Vp
VF
VF
KEY1
KEY0
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
GND (SYS)
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
GND (SYS)
P20
P19
REMOC
G (SYS)
D5.6V
SBLED
VF1
VF2
K1
K0
G (SYS)
W1
W2
W3
SUPER BASS
FLD
PH1
GP1U581X
GND
+5V
VOUT
5.3V
5.3V
C21
100/10
D10
1SS131
5.8V
TR1
2SA1317
-0.4V
R21
2.2K
R22
4.7K
5.8V
D7
D8
D9
120
R17
120
R18
SEL2913K
×3
F1
F1
22/35
C19
NC
NC
P13
P14
P15
P16
P17
P18
TO CONTROL PCB J6
DC+12V
GND (DC)
DC-12V
L ON
L OFF
GND (SIG)
R OFF
R ON
GND (SIG)
W5
C15
10/16
TREBLE
VR1
10KB
C9
0.0082
R13
2.2K
C11
SL22P
11.8V
0V
R15
100
C13
10/16
IC1
NJM4558L
R5 10K
C1
10/16
R3
10K
1/2
11.8V
C3
10/16
R9
4.7K
C5
0.1
C7
0.1
R11
4.7K
VR2
10KB
BASS
IC2
NJM4558L
R1
220K
R7
100K
VR1, VR2 RK14K124
220K
R2
2/2
R8
100K
C2
10/16
R4
10K
-11.9V
C4
10/16
R10
4.7K
C6
0.1
C8
0.1
R12
4.7K
R16
100
C14
10/16
R6 10K
R14
2.2K
C10
0.0082
C12
SL22P
C16
10/16

INDICATED

DURING FM

NOTE

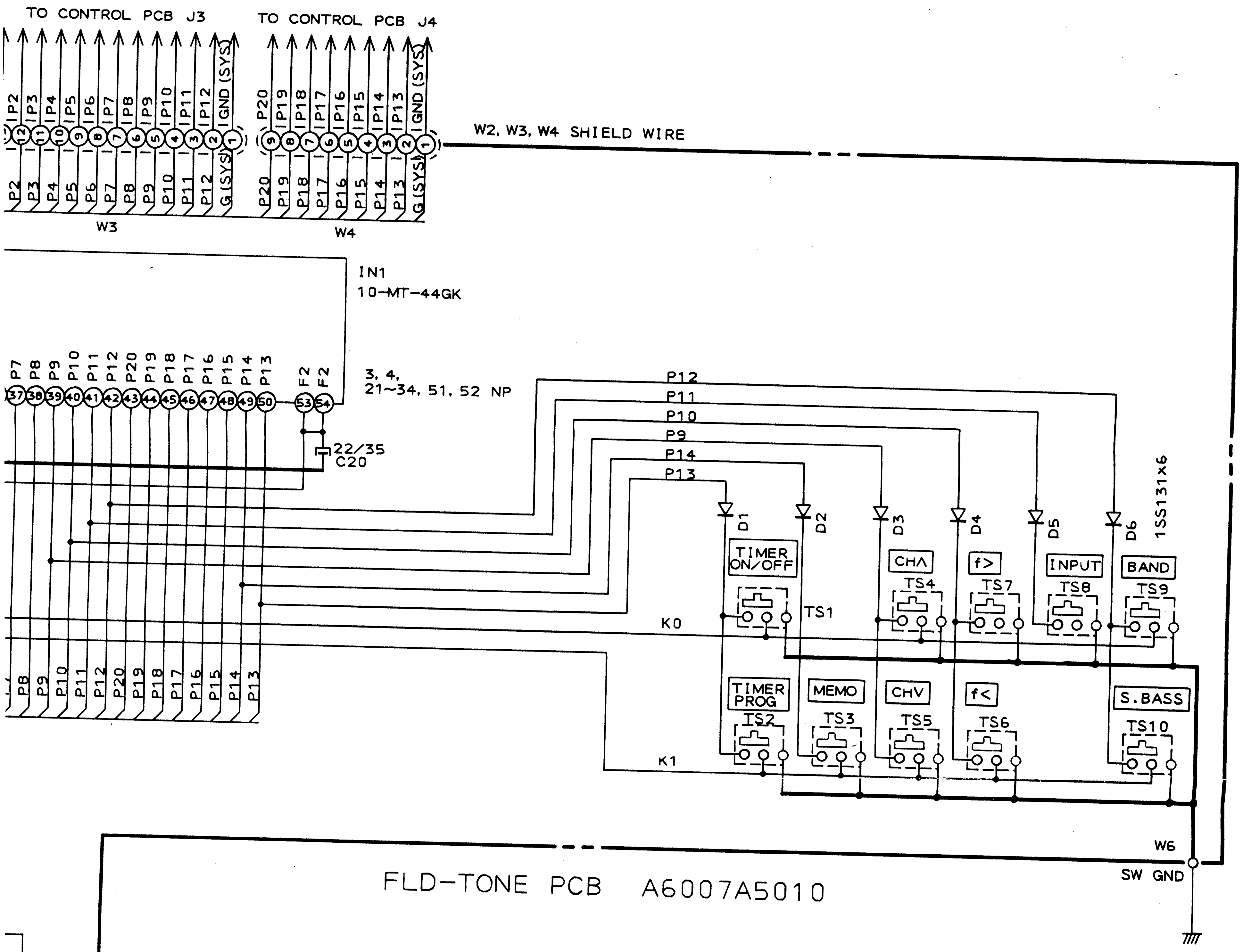
UNLESS OTH

ALL RESIST

ALL ⊣⊢ CAP

ALL ⊣⊢ CAP

LAST No. C


TO CONTROL PCB J3
TO CONTROL PCB J4
P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 GND (SYS)
P20 P19 P18 P17 P16 P15 P14 P13 GND (SYS)
G (SYS)
W3
W4
W2, W3, W4 SHIELD WIRE
IN1
10-MT-44GK
P7 P8 P9 P10 P11 P12 P20 P19 P18 P17 P16 P15 P14 P13 F2 F2
3, 4,
21~34, 51, 52 NP
22/35
C20
P12
P11
P10
P9
P14
P13
D1 D2 D3 D4 D5 D6
1SS131x6
TIMER ON/OFF
TS1
CHΛ
TS4
f>
TS7
INPUT
TS8
BAND
TS9
K0
TIMER PROG
TS2
MEMO
TS3
CHV
TS5
f<
TS6
S.BASS
TS10
K1
W6
SW GND
FLD-TONE PCB A6007A5010

▬ B (POWER SUPPLY) LINE

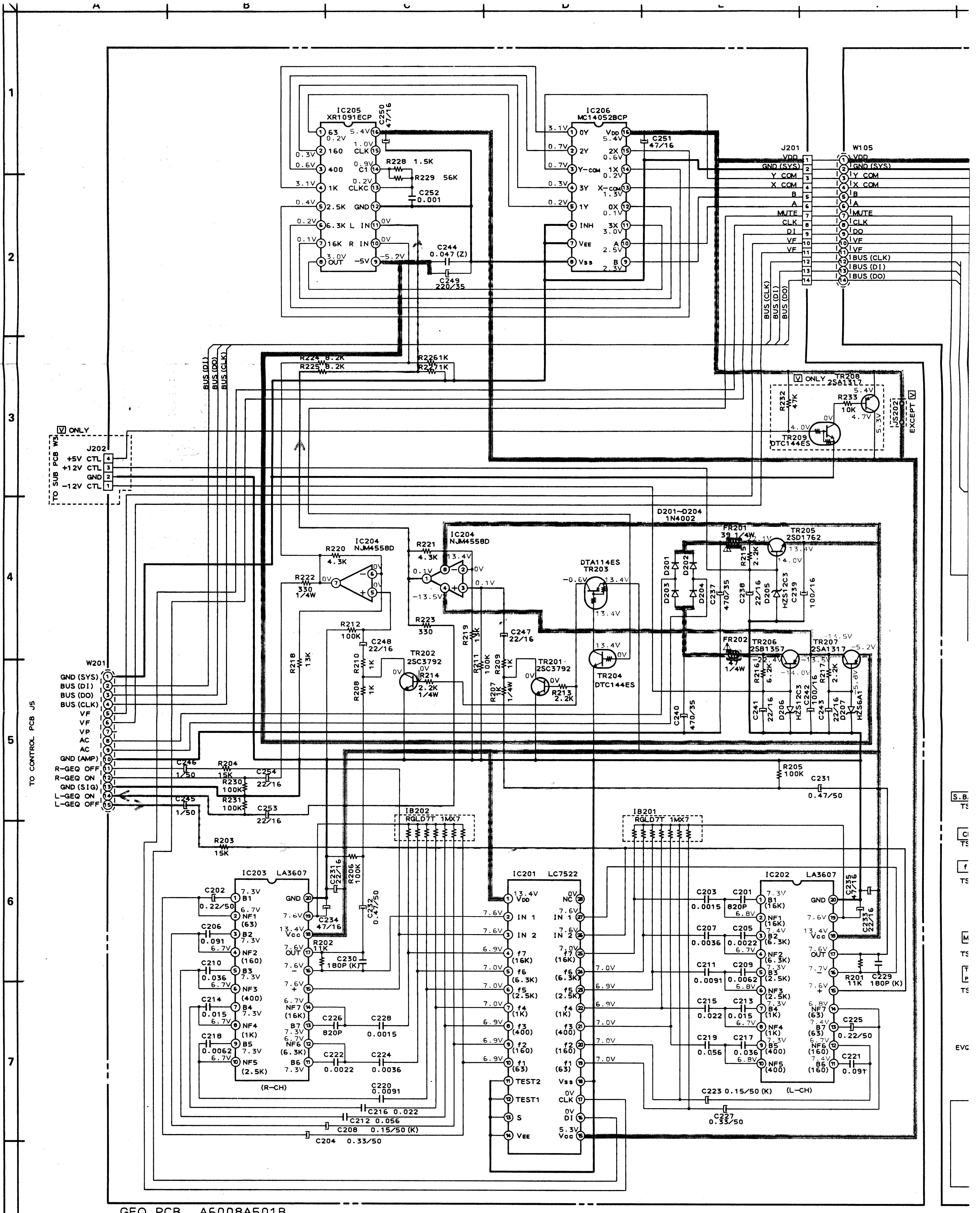
— AUDIO SIGNAL LINE (L-CH)

INDICATED VOLTAGES WERE MEASURED
DURING FM STEREO MODE.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL -||- CAPACITORS IN μF 50WV (J)
ALL -|]- CAPACITORS IN μF (M)
LAST No. C21, D10, R22

TP-570
FLD TONE
SCHEMATIC DIAGRAM
NO.12-6 A601106M
A2

13


A
B
C
D
E
F
1
2
3
4
5
6
7
8
IC205
XR1091ECP
C250 47/16
IC206
MC14052BCP
C251 47/16
R228 1.5K
R229 56K
C252 0.001
C244 0.047 (Z)
C249 220/35
J201
W105
VDD
GND (SYS)
Y COM
X COM
B
A
MUTE
CLK
DI
DO
VF
BUS (CLK)
BUS (DI)
BUS (DO)
R224 8.2K
R225 8.2K
R226 1K
R227 1K
V ONLY
TR208 2SA1317
R232 47K
R233 10K
TR209 DTC144ES
JS202
EXCEPT V
J202
+5V CTL
+12V CTL
GND
-12V CTL
TO SUB PCB W3
D201~D204 1N4002
FR201 39 1/4W
TR205 2SD1762
IC204 NJM4558D
R220 4.3K
R221 4.3K
R222 330 1/4W
DTA114ES TR203
R223 330
R212 100K
C248 22/16
C247 22/16
TR202 2SC3792
TR201 2SC3792
R214 2.2K 1/4W
R213 2.2K
TR204 DTC144ES
FR202 4.7 1/4W
TR206 2SB1357
TR207 2SA1317
W201
GND (SYS)
BUS (DI)
BUS (DO)
BUS (CLK)
VF
VP
AC
GND (AMP)
R-GEQ OFF
R-GEQ ON
GND (SIG)
L-GEQ ON
L-GEQ OFF
TO CONTROL PCB J5
C246 1/50
R204 15K
C254 22/16
R230 100K
R231 100K
C245 1/50
C253 22/16
R203 15K
R205 100K
C231 0.47/50
IB202 RGLD7T 1MX7
IB201 RGLD7T 1MX7
IC203 LA3607
(R-CH)
IC201 LC7522
IC202 LA3607
(L-CH)
C202 0.22/50
C206 0.091
C210 0.036
C214 0.015
C218 0.0062
C226 820P
C228 0.0015
C222 0.0022
C224 0.0036
C220 0.0091
C216 0.022
C212 0.056
C208 0.15/50 (K)
C204 0.33/50
C234 47/16
R202 11K
C230 180P (K)
C232 0.47/50
R206 100K
C203 0.0015
C201 820P
C207 0.0036
C205 0.0022
C211 0.0091
C209 0.0062
C215 0.022
C213 0.015
C219 0.056
C217 0.036
C223 0.15/50 (K)
C227 0.33/50
C225 0.22/50
C221 0.091
R201 11K
C229 180P (K)
C235 47/16
C233 22/16

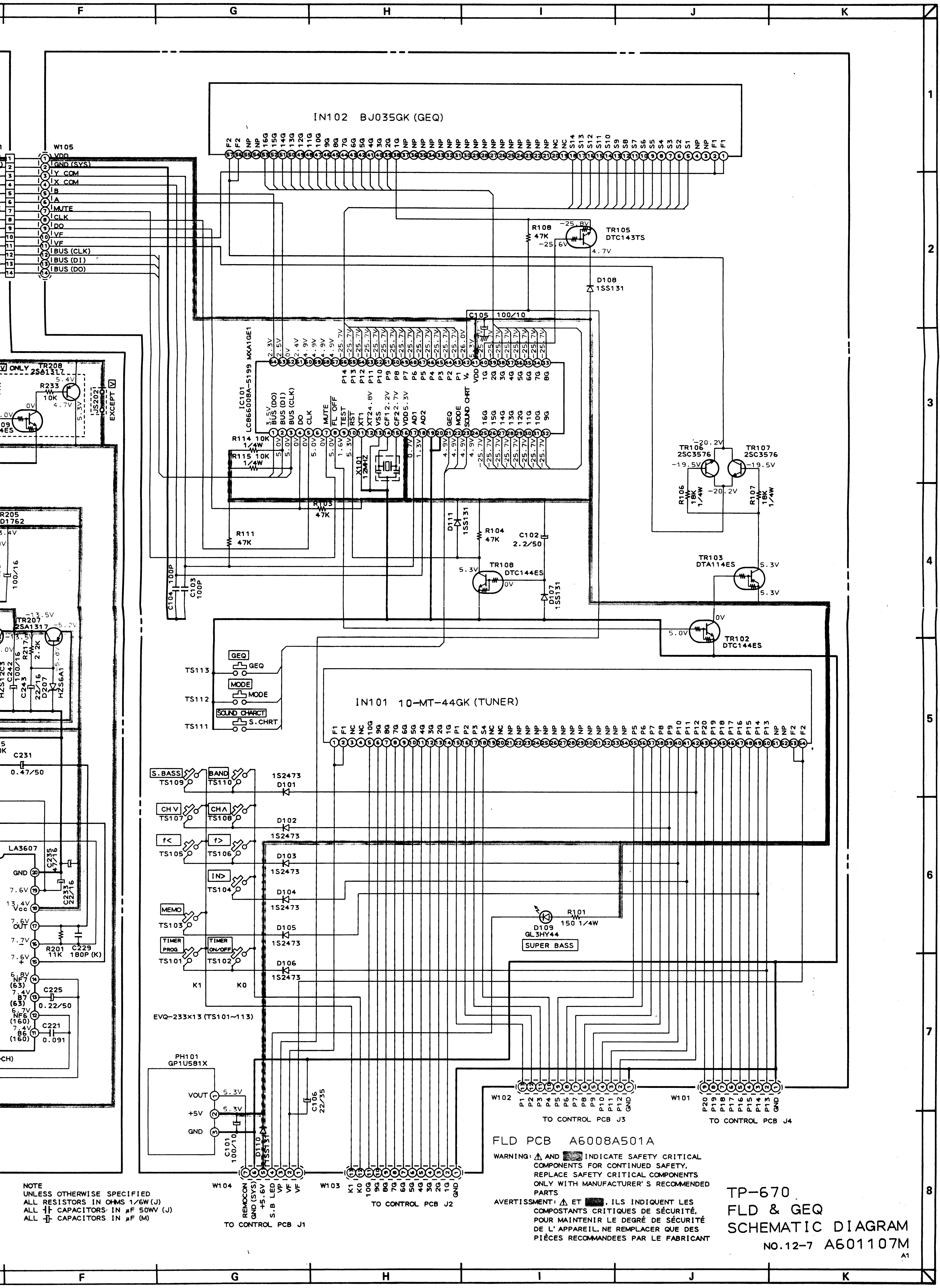
GEQ PCB A6008A501B

INDICATED VOLTAGES WERE MEASURED
WHEN NO SIGNAL WAS BEING INPUT.

━━ B (POWER SUPPLY) LINE

– – – AUDIO SIGNAL LINE (L-CH)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL ⊣⊢ CAPACITORS IN μF 50WV (
ALL ⊣⊢ CAPACITORS IN μF (M)


IN102 BJ035GK (GEQ)
IC101 LC866008A-5199 MXA1GE1
IN101 10-MT-44GK (TUNER)
W105
VDD
GND (SYS)
Y COM
X COM
B
A
MUTE
CLK
DO
VF
VF
BUS (CLK)
BUS (DI)
BUS (DO)
TR105 DTC143TS
R108 47K
D108 1SS131
C105 100/10
TR106 2SC3576
TR107 2SC3576
R106 18K 1/4W
R107 18K 1/4W
R114 10K 1/4W
R115 10K 1/4W
R103 47K
R111 47K
X101 12MHZ
D111 1SS131
R104 47K
C102 2.2/50
TR108 DTC144ES
D107 1SS131
TR103 DTA114ES
TR102 DTC144ES
C104 100P
C103 100P
TS113 GEQ
TS112 MODE
TS111 SOUND CHARCT S.CHRT
S.BASS TS109
BAND TS110
CH V TS107
CH Λ TS108
f< TS105
f> TS106
IN> TS104
MEMO TS103
TIMER PROG TS101
TIMER ON/OFF TS102
D101 1S2473
D102 1S2473
D103 1S2473
D104 1S2473
D105 1S2473
D106 1S2473
K1
K0
EVQ-233×13 (TS101~113)
D109 GL3HY44
R101 150 1/4W
SUPER BASS
PH101 GP1U581X
VOUT
+5V
GND
C106 22/35
C101 100/10
D110 1SS131
W104
REMOCON
GND (SYS)
+5.6V
S.B LED
VP
VF
VF
TO CONTROL PCB J1
W103
TO CONTROL PCB J2
W102
TO CONTROL PCB J3
W101
TO CONTROL PCB J4
TR208 2SA1317
R233 10K
JS202
EXCEPT
ONLY
R205 D1762
TR207 2SA1317
R217 2.2K
D207 HZS6A1
C242 100/16
C243 22/16
C231 0.47/50
LA3607
C235 47/16
C233 22/16
R201 11K
C229 180P (K)
C225 0.22/50
C221 0.091
F
G
H
I
J
K
1
2
3
4
5
6
7
8

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL ⊣⊢ CAPACITORS IN µF 50WV (J)
ALL ⊣⊢ CAPACITORS IN µF (M)

FLD PCB A6008A501A

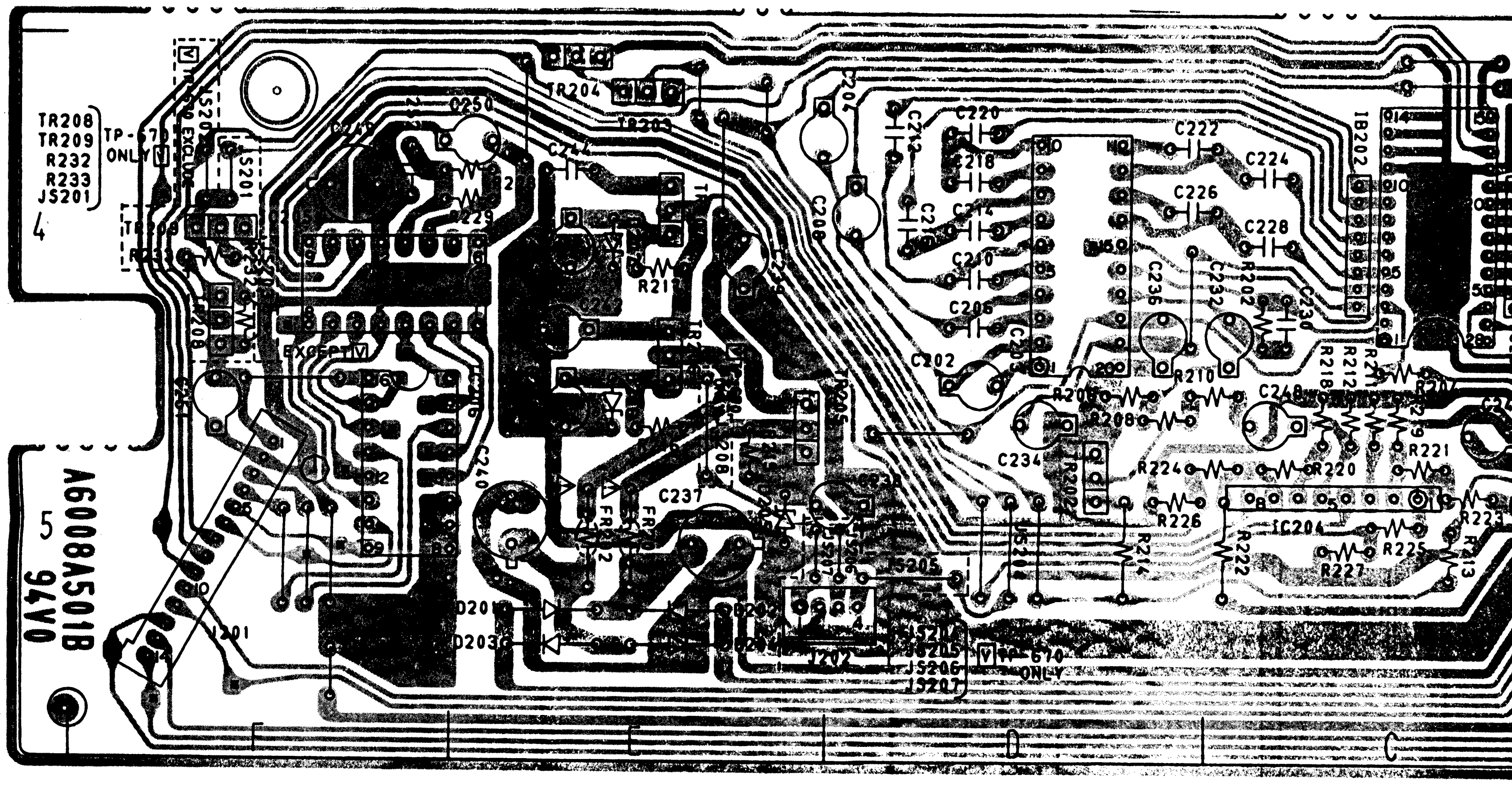
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

TP-670
FLD & GEQ
SCHEMATIC DIAGRAM

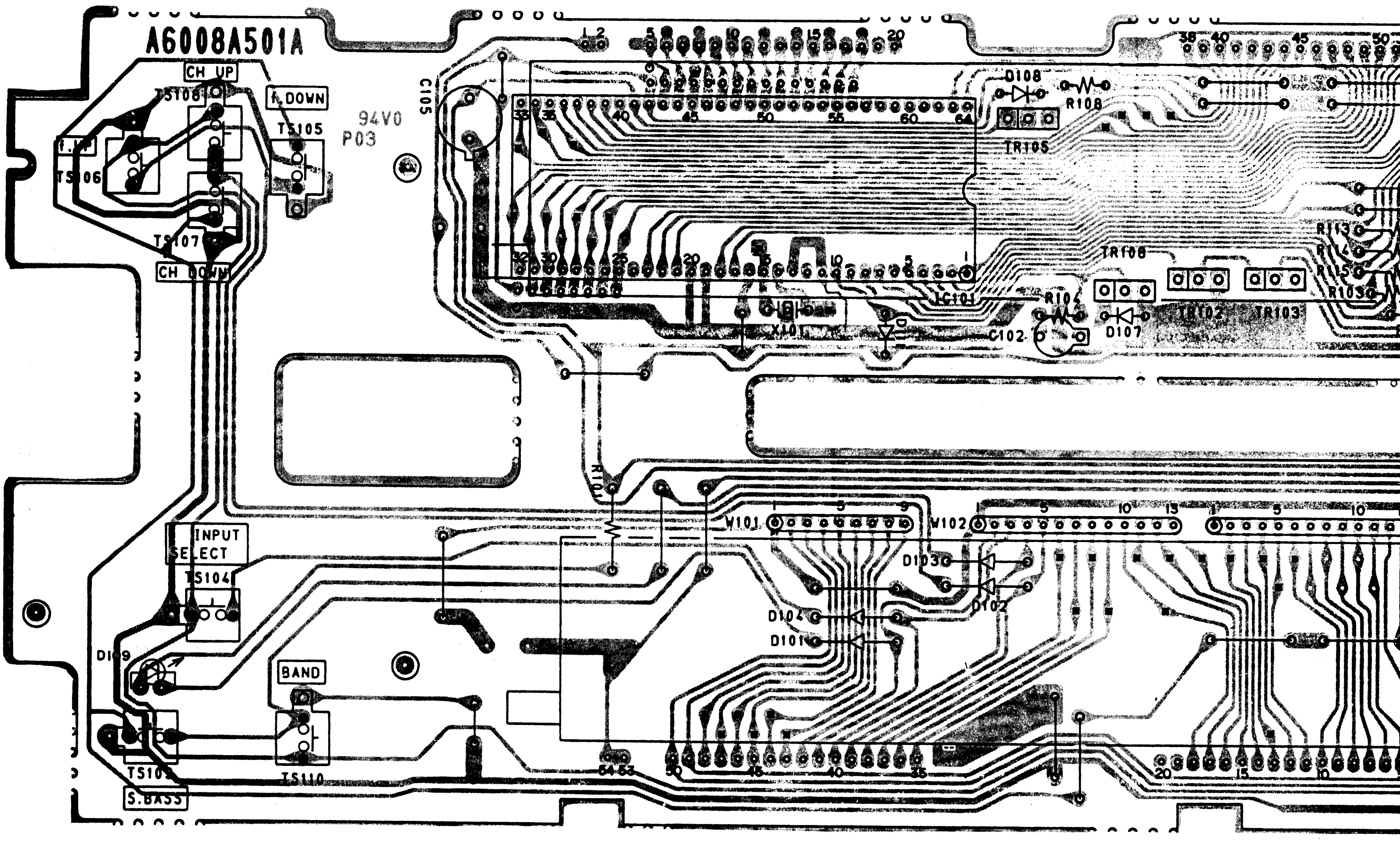
NO.12-7 A601107M

A1

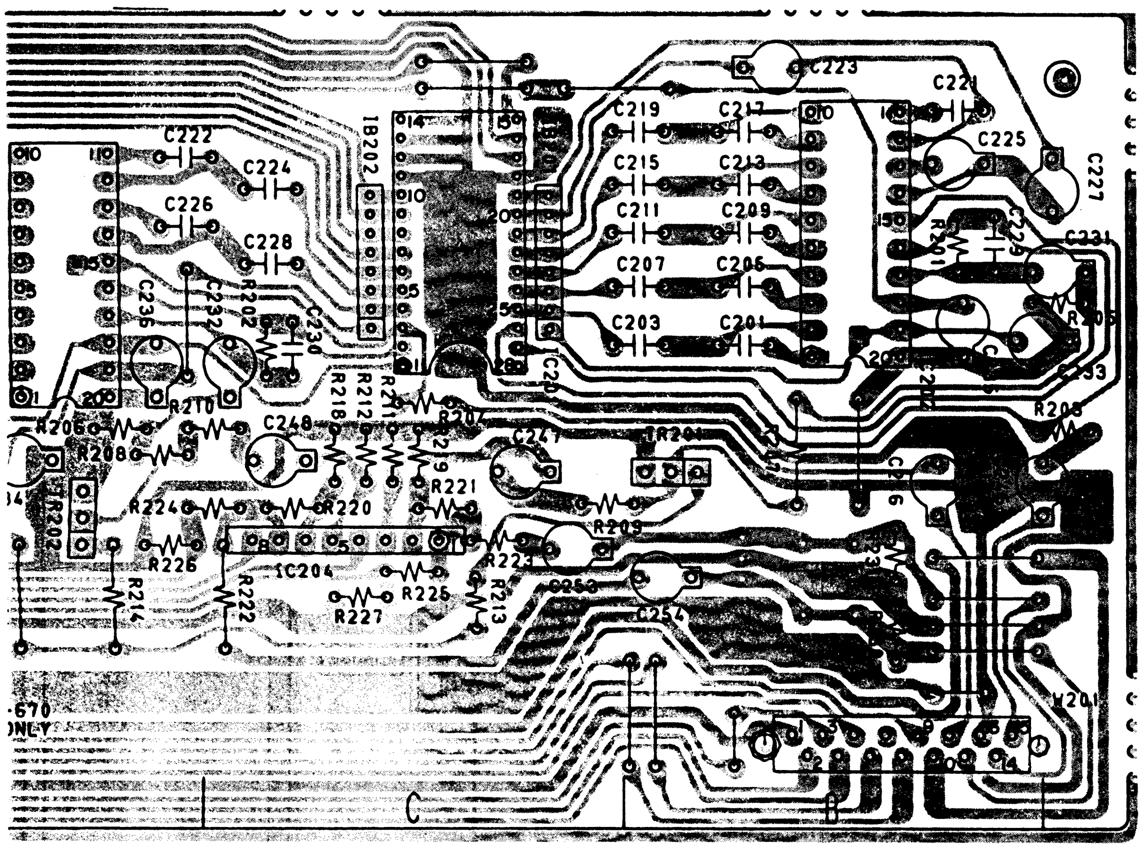

TR208
TR209
R232
R233
JS201
TP-670 ONLY
EXCEPT
4
5
A6008A501B
94V0
C250
TR204
TR203
C220
C222
C224
C226
C228
C216
C214
C210
C206
C202
C236
C234
C248
C237
IB202
IC204
R210
R208
R209
R211
R212
R218
R220
R221
R222
R223
R224
R225
R226
R227
R229
D201
D203
J201
J202
JS205
JS206
JS207
TP-670 ONLY

GEQ PCB A6008A501BJ2

WARNING: ⚠INDI
REPLA
RECOM
AVERTISSEMENT:
POUR
NE RE


A6008A501A
CH UP
F.DOWN
F.UP
CH DOWN
TS108
TS105
TS106
TS107
94V0
P03
C105
D108
R108
TR105
TR106
TR102
TR103
IC101
X101
R104
C102
D107
R113
R115
R103
R110
V101
V102
D103
D102
D104
D101
INPUT SELECT
TS104
D109
BAND
TS102
TS110
S.BASS

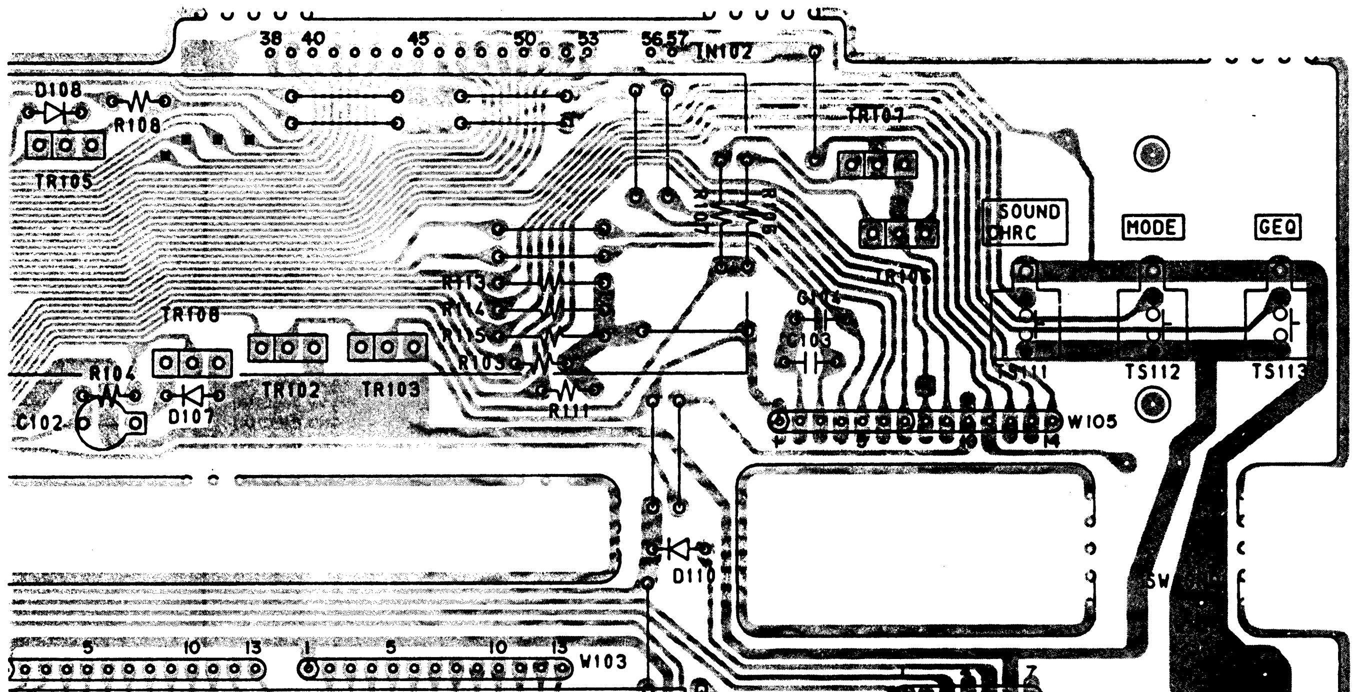
FLD PCB A6008A501AJ2


C223
C221
C225
C227
C219
C217
C215
C213
C211
C209
C207
C205
C203
C201
C231
C233
R201
R205
R208
C222
C224
C226
C228
C230
C232
C236
IB202
R206
R208
R210
R218
R212
R217
R220
R219
R221
C248
C247
TR201
R224
R220
R226
R214
R222
IC204
R227
R225
R213
R223
R209
C252
C254
W201
-670
ONLY

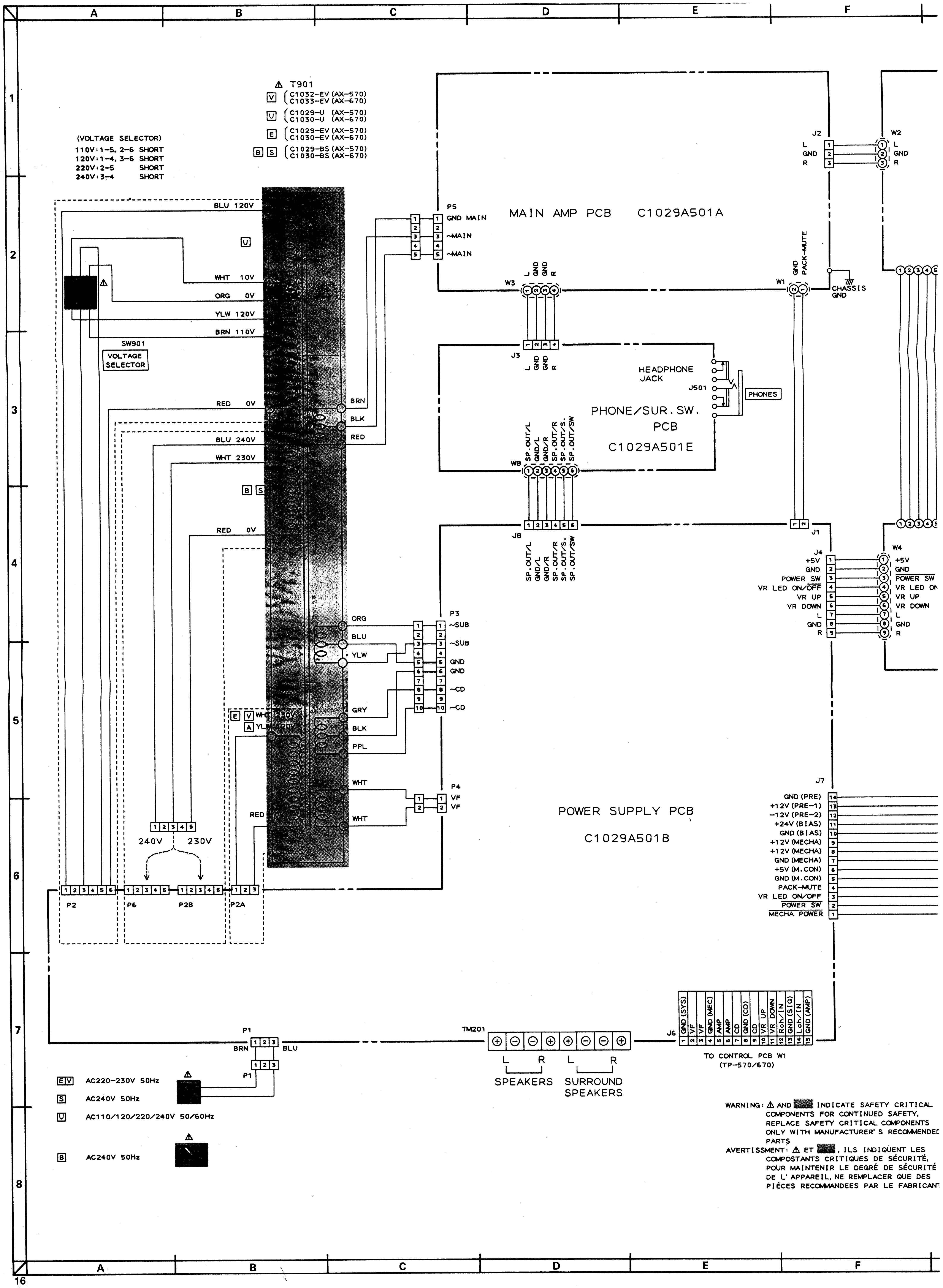
008A501BJ2

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

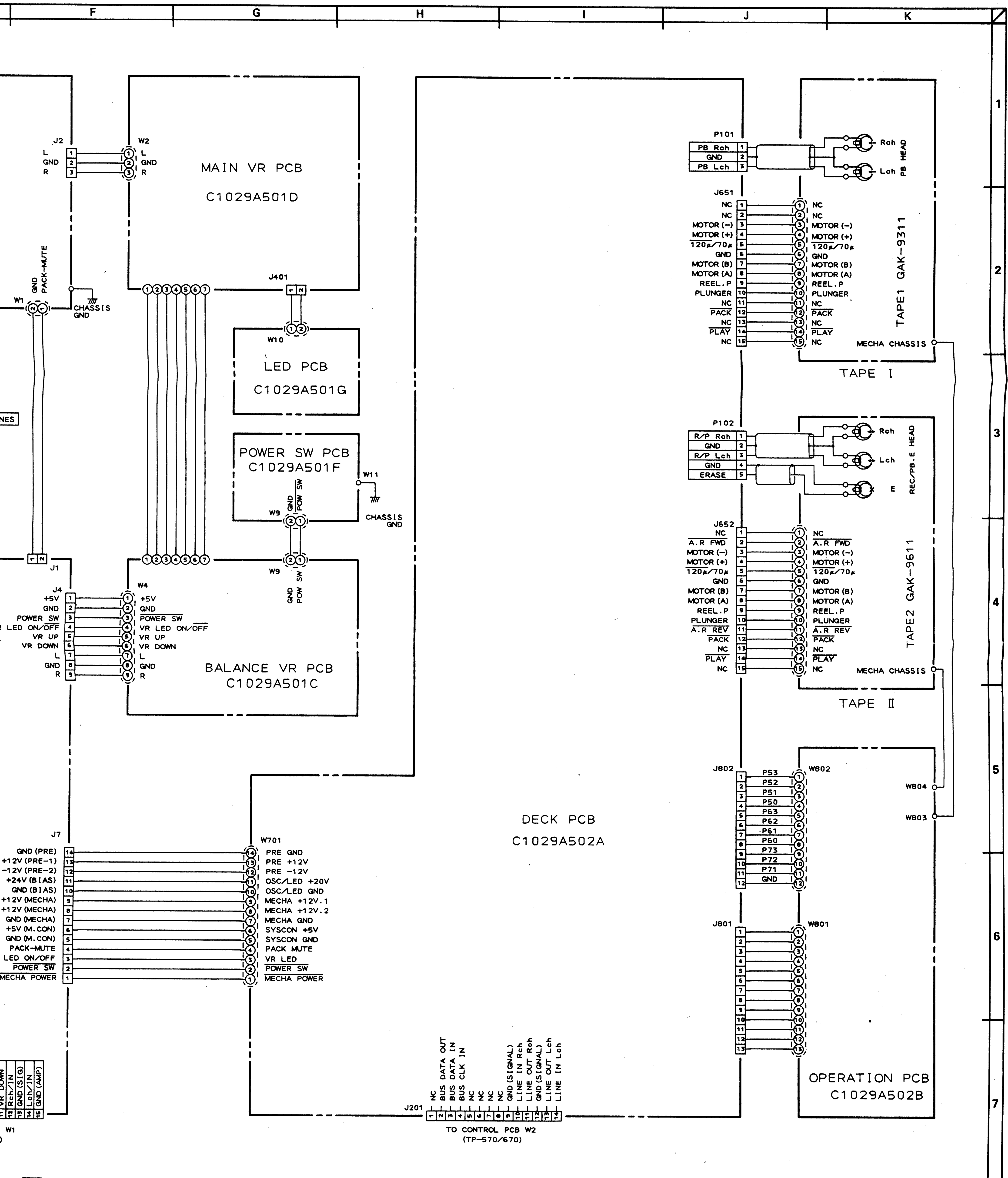

38
40
45
50
53
56
57
IN102
D108
R108
TR105
TR107
R107
R106
TR106
SOUND
HRC
MODE
GEQ
R113
R114
R115
R105
R111
C104
C103
TR108
TR102
TR103
R104
D107
C102
TS111
TS112
TS113
W105
D110
SW
W103
PH101
IC101
MEMO
TIMER
PROG
TIMER
ON/OFF
TS103
TS101
TS102
D105
D106
IN101
20
15
10
5
13
1

6008A501AJ2


A
B
C
D
E
F
1
2
3
4
5
6
7
8
⚠ T901
V (C1032-EV (AX-570)
C1033-EV (AX-670)
U (C1029-U (AX-570)
C1030-U (AX-670)
E (C1029-EV (AX-570)
C1030-EV (AX-670)
B S (C1029-BS (AX-570)
C1030-BS (AX-670)
(VOLTAGE SELECTOR)
110V:1-5, 2-6 SHORT
120V:1-4, 3-6 SHORT
220V:2-5 SHORT
240V:3-4 SHORT
BLU 120V
U
WHT 10V
ORG 0V
YLW 120V
BRN 110V
SW901
VOLTAGE SELECTOR
RED 0V
BLU 240V
WHT 230V
B S
RED 0V
E V WHT 230V
A YLW 120V
RED
BRN
BLK
RED
ORG
BLU
YLW
GRY
BLK
PPL
WHT
WHT
P5
GND MAIN
~MAIN
~MAIN
MAIN AMP PCB C1029A501A
W3
L
GND
GND
R
J3
L
GND
GND
R
J2
L
GND
R
W2
L
GND
R
GND
PACK-MUTE
W1
CHASSIS GND
HEADPHONE JACK
J501
PHONES
PHONE/SUR.SW. PCB
C1029A501E
W8
SP.OUT/L
GND/L
GND/R
SP.OUT/R
SP.OUT/S.
SP.OUT/SW
J8
SP.OUT/L
GND/L
GND/R
SP.OUT/R
SP.OUT/S.
SP.OUT/SW
J1
J4
+5V
GND
POWER SW
VR LED ON/OFF
VR UP
VR DOWN
L
GND
R
W4
+5V
GND
POWER SW
VR LED ON
VR UP
VR DOWN
L
GND
R
P3
~SUB
~SUB
GND
GND
~CD
~CD
P4
VF
VF
POWER SUPPLY PCB
C1029A501B
J7
GND (PRE)
+12V (PRE-1)
-12V (PRE-2)
+24V (BIAS)
GND (BIAS)
+12V (MECHA)
+12V (MECHA)
GND (MECHA)
+5V (M.CON)
GND (M.CON)
PACK-MUTE
VR LED ON/OFF
POWER SW
MECHA POWER
240V
230V
P2
P6
P2B
P2A
P1
BRN
BLU
P1
TM201
L
R
L
R
SPEAKERS
SURROUND SPEAKERS
J6
GND (SYS)
VF
VF
GND (MEC)
AMP
AMP
CD
GND (CD)
CD
VR UP
VR DOWN
Rch/IN
GND (SIG)
Lch/IN
GND (AMP)
TO CONTROL PCB W1
(TP-570/670)
E V AC220-230V 50Hz
S AC240V 50Hz
U AC110/120/220/240V 50/60Hz
B AC240V 50Hz

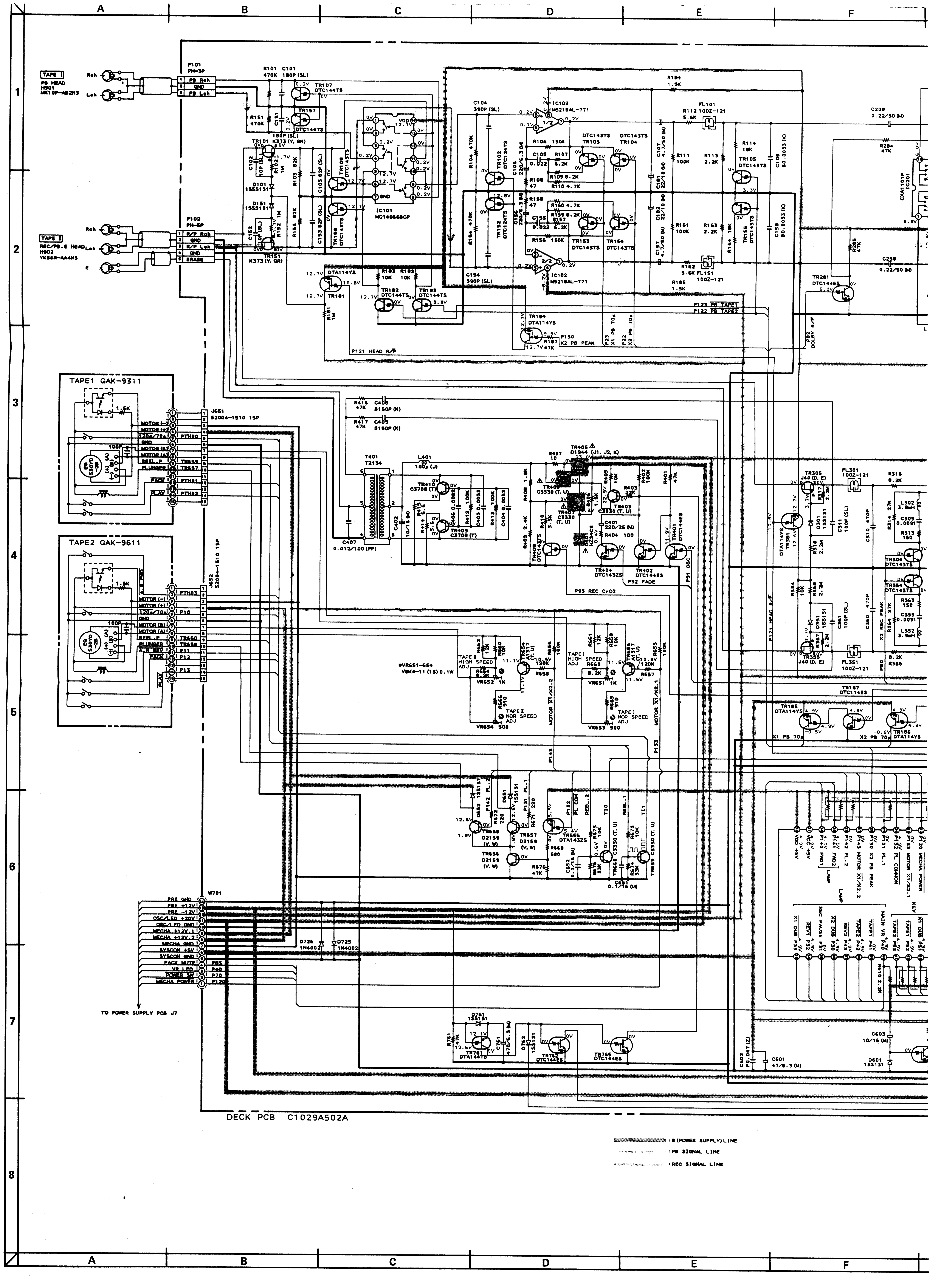
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

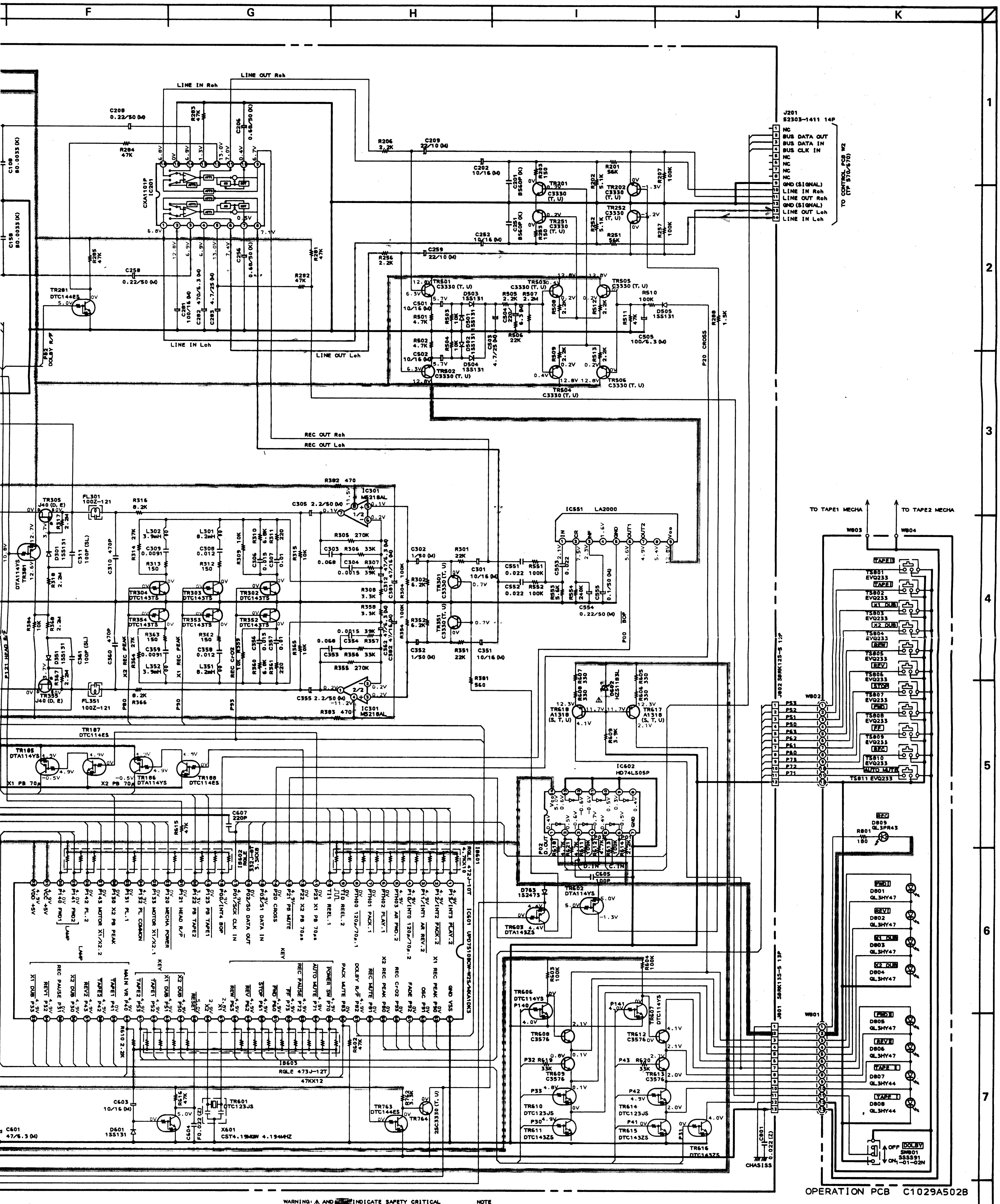
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


F
G
H
I
J
K
1
2
3
4
5
6
7
8
J2
L
GND
R
W2
L
GND
R
MAIN VR PCB
C1029A501D
GND
PACK-MUTE
W1
CHASSIS GND
J401
W10
LED PCB
C1029A501G
NES
POWER SW PCB
C1029A501F
W11
CHASSIS GND
W9
GND
POW SW
J1
J4
+5V
GND
POWER SW
R LED ON/OFF
VR UP
VR DOWN
L
GND
R
W4
+5V
GND
POWER SW
VR LED ON/OFF
VR UP
VR DOWN
L
GND
R
BALANCE VR PCB
C1029A501C
J7
GND (PRE)
+12V (PRE-1)
-12V (PRE-2)
+24V (BIAS)
GND (BIAS)
+12V (MECHA)
+12V (MECHA)
GND (MECHA)
+5V (M.CON)
GND (M.CON)
PACK-MUTE
LED ON/OFF
POWER SW
MECHA POWER
W701
PRE GND
PRE +12V
PRE -12V
OSC/LED +20V
OSC/LED GND
MECHA +12V.1
MECHA +12V.2
MECHA GND
SYSCON +5V
SYSCON GND
PACK MUTE
VR LED
POWER SW
MECHA POWER
VR DOWN
Rch/IN
GND (SIG)
Lch/IN
GND (AMP)
W1
DECK PCB
C1029A502A
J201
NC
BUS DATA OUT
BUS DATA IN
BUS CLK IN
NC
NC
NC
NC
GND (SIGNAL)
LINE IN Rch
LINE OUT Rch
GND (SIGNAL)
LINE OUT Lch
LINE IN Lch
TO CONTROL PCB W2
(TP-570/670)
P101
PB Rch
GND
PB Lch
Rch
Lch
PB HEAD
J651
NC
NC
MOTOR (–)
MOTOR (+)
120μ/70μ
GND
MOTOR (B)
MOTOR (A)
REEL.P
PLUNGER
NC
PACK
NC
PLAY
NC
TAPE1 GAK-9311
MECHA CHASSIS
TAPE I
P102
R/P Rch
GND
R/P Lch
GND
ERASE
Rch
Lch
E
REC/PB.E HEAD
J652
NC
A.R FWD
MOTOR (–)
MOTOR (+)
120μ/70μ
GND
MOTOR (B)
MOTOR (A)
REEL.P
PLUNGER
A.R REV
PACK
NC
PLAY
NC
TAPE2 GAK-9611
MECHA CHASSIS
TAPE II
J802
W802
P53
P52
P51
P50
P63
P62
P61
P60
P73
P72
P71
GND
W804
W803
J801
W801
OPERATION PCB
C1029A502B

A AND ▇ INDICATE SAFETY CRITICAL
OMPONENTS FOR CONTINUED SAFETY.
EPLACE SAFETY CRITICAL COMPONENTS
NLY WITH MANUFACTURER'S RECOMMENDED
ARTS
ENT: ⚠ ET ▇, ILS INDIQUENT LES
OMPOSTANTS CRITIQUES DE SÉCURITÉ.
OUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
E L'APPAREIL, NE REMPLACER QUE DES
IÈCES RECOMMANDEES PAR LE FABRICANT

AX-570/670
CONNECTION DIAGRAM
NO.12-8 C103201M
A1


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TAPE I
PB HEAD
H901
MK10P-AB2N3
Rch
Lch
TAPE II
REC/PB.E HEAD
H902
YK56R-AA4N3
E
P101
PH-3P
PB Rch
GND
PB Lch
P102
PH-5P
R/P Rch
R/P Lch
ERASE
R101 470K
C101 180P (SL)
TR107 DTC144TS
R151 470K
C151 180P (SL)
TR157 DTC144TS
TR101 K373 (Y, GR)
TR151 K373 (Y, GR)
D101 1SS131
D151 1SS131
TR108 DTC143TS
TR158 DTC143TS
IC101 MC14066BCP
C104 390P (SL)
C154 390P (SL)
R104 470K
R154 470K
TR102 DTC124TS
TR152 DTC124TS
IC102 M5218AL-771
TR103 DTC143TS
TR104 DTC143TS
TR153 DTC143TS
TR154 DTC143TS
R184 1.5K
R185 1.5K
FL101 100Z-121
FL151 100Z-121
R112 5.6K
R162 5.6K
TR105 DTC143TS
TR155 DTC143TS
C108 B0.0033 (K)
C158 B0.0033 (K)
C208 0.22/50 (N)
C258 0.22/50 (N)
R284 47K
R285 47K
CXA1101P IC201
TR281 DTC144ES
TR181 DTA114YS
TR182 DTC144TS
TR183 DTC144TS
TR184 DTA114YS
P130 X2 PB PEAK
P123 PB TAPE1
P122 PB TAPE2
P121 HEAD R/P
P82 DOLBY R/P
TAPE1 GAK-9311
TAPE2 GAK-9611
J651 52004-1510 15P
J652 52004-1510 15P
MOTOR (−)
MOTOR (+)
120μ/70μ
GND
MOTOR (B)
MOTOR (A)
REEL.P
PLUNGER
PACK
PLAY
A.B REV
PTH00
PTH01
PTH02
PTH03
TR659
TR657
TR660
TR658
P10
P11
P12
P13
R416 47K
R417 47K
C408 B150P (K)
C409 B150P (K)
T401 T2134
L401 100μ (J)
C407 0.012/100 (PP)
TR410 C3708 (T)
TR409 C3708 (T)
TR405 D1944 (J1, J2, K)
TR406 C3330 (T, U)
TR407 C3330 (T, U)
TR408 DTC143TS
TR403
TR404 DTC143ZS
TR402 DTC144ES
TR401 DTC144ES
C401 220/25 (N)
P93 REC CrO2
P92 FADE
P91 OSC
TR305 J40 (D, E)
TR355 J40 (D, E)
FL301 100Z-121
FL351 100Z-121
TR301 DTA114YS
TR304 DTC143TS
TR354 DTC143TS
X2 REC PEAK
*VR651~654 VSK4-11 (1S) 0.1W
TAPE II HIGH SPEED ADJ
TAPE I HIGH SPEED ADJ
TAPE II NOR SPEED ADJ
TAPE I NOR SPEED ADJ
TR654 A1317 (T, U)
TR653 A1317 (T, U)
VR652 1K
VR651 1K
VR654 500
VR653 500
MOTOR X1/X2.2
MOTOR X1/X2.1
P143
P133
TR185 DTA114YS
TR186 DTA114YS
TR187 DTC114ES
X1 PB 70μ
X2 PB 70μ
TR658 D2159
TR657 D2159 (V, W)
TR656 D2159 (V, W)
TR655 DTA143ZS
TR660 C3330 (T, U)
TR659 C3330 (T, U)
P142 PL.2
P131 PL.1
P132 PL COM
T10 REEL.2
T11 REEL.1
W701
PRE GND
PRE +12V
PRE −12V
OSC/LED +20V
OSC/LED GND
MECHA +12V.1
MECHA +12V.2
MECHA GND
SYSCON +5V
SYSCON GND
PACK MUTE
VR LED
POWER SW
MECHA POWER
P83
P40
P70
P120
D726 1N4002
D725 1N4002
TO POWER SUPPLY PCB J7
TR761 DTA144TS
TR762 DTC144ES
TR765 DTC144ES
D761 1SS131
D762 1SS131
C761 470/6.3 (N)
C602 F0.047 (Z)
C601 47/6.3 (N)
C603 10/16 (N)
D601 1SS131
R610 2.2K
VDD +5V
MOTOR X1/X2.2
MOTOR X1/X2.1
MECHA POWER
LAMP
KEY
X1 DUB
REV1
REC PAUSE
X2 DUB
REV2
TAPE1
MAIN VR
TAPE2
DECK PCB C1029A502A
B (POWER SUPPLY) LINE
PB SIGNAL LINE
REC SIGNAL LINE


F
G
H
I
J
K
1
2
3
4
5
6
7
8
LINE IN Rch
LINE OUT Rch
LINE IN Lch
LINE OUT Lch
REC OUT Rch
REC OUT Lch
CXA1101P IC201
J201 52303-1411 14P
NC
BUS DATA OUT
BUS DATA IN
BUS CLK IN
NC
NC
NC
NC
GND (SIGNAL)
LINE IN Rch
LINE OUT Rch
GND (SIGNAL)
LINE OUT Lch
LINE IN Lch
TO CONTROL PCB W2 (TP 510/570)
TR201 C3330 (T, U)
TR202 C3330 (T, U)
TR251 C3330 (T, U)
TR252 C3330 (T, U)
TR281 DTC144ES
P82 DOLBY R/P
TR501 C3330 (T, U)
TR502 C3330 (T, U)
TR503 C3330 (T, U)
TR504 C3330 (T, U)
TR505 C3330 (T, U)
TR506 C3330 (T, U)
P20 CROSS
IC301 M5218AL
IC551 LA2000
TR305 J40 (D, E)
TR355 J40 (D, E)
FL301 100Z-121
FL351 100Z-121
TR304 DTC143TS
TR303 DTC143TS
TR302 DTC143TS
TR354 DTC143TS
TR353 DTC143TS
TR352 DTC143TS
TR301 C3330 (T, U)
TR351 C3330 (T, U)
X2 REC PEAK
X1 REC PEAK
REC CrO2
P121 HEAD R/P
P80
P90
P93
P00 BOP
TR185 DTA114YS
TR187 DTC114ES
TR186 DTA114YS
TR188 DTC114ES
X1 PB 70μ
X2 PB 70μ
TR618 A1318 (S, T, U)
TR617 A1318 (S, T, U)
D602 HZS11B3L
IC602 HD74LS05P
TO TAPE1 MECHA
TO TAPE2 MECHA
W803
W804
J802 SBRK12S-S 12P
W802
TAPE1
TS801 EVQ233
TAPE2
TS802 EVQ233
X1 DUB
TS803 EVQ233
X2 DUB
TS804 EVQ233
REW
TS805 EVQ233
REV
TS806 EVQ233
STOP
TS807 EVQ233
PAU
TS808 EVQ233
FF
TS809 EVQ233
REC
TS810 EVQ233
AUTO MUTE
TS811 EVQ233
C607 220P
IB602 RGLE 472J-5T 3.3KX8
IB601 RGLE 472J-10T 4.7KX10
IC601 UPD7510OCW-W23/AR&AT0K3
IB603 RGLE 473J-12T 47KX12
D765 1S2473
TR602 DTA114YS
TR603 DTA143ZS
C605 100P
D.IN
C.IN
REC
D809 GL3PR43
R801 180
FWD1
D801 GL3HY47
REV1
D802 GL3HY47
X1 DUB
D803 GL3HY47
X2 DUB
D804 GL3HY47
FWD2
D805 GL3HY47
REV2
D806 GL3HY47
TAPE 2
D807 GL3HY44
TAPE 1
D808 GL3HY44
J801 SBRK13S-S 13P
W801
TR606 DTC114YS
TR607 DTC114YS
TR608 C3576
TR612 C3576
TR609 C3576
TR613 C3576
TR610 DTC123JS
TR614 DTC123JS
TR611 DTC143ZS
TR615 DTC143ZS
TR616 DTC143ZS
TR763 DTC144ES
TR764 2SC3330 (T, U)
C603 10/16 (M)
D601 1SS131
C601 47/6.3 (M)
TR601 DTC123JS
X601 CST4.19MGW 4.194MHZ
C801 0.022 (Z)
CHASSIS
OFF
ON
DOLBY
SW801 SSS591 -01-02N
OPERATION PCB C1029A502B

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

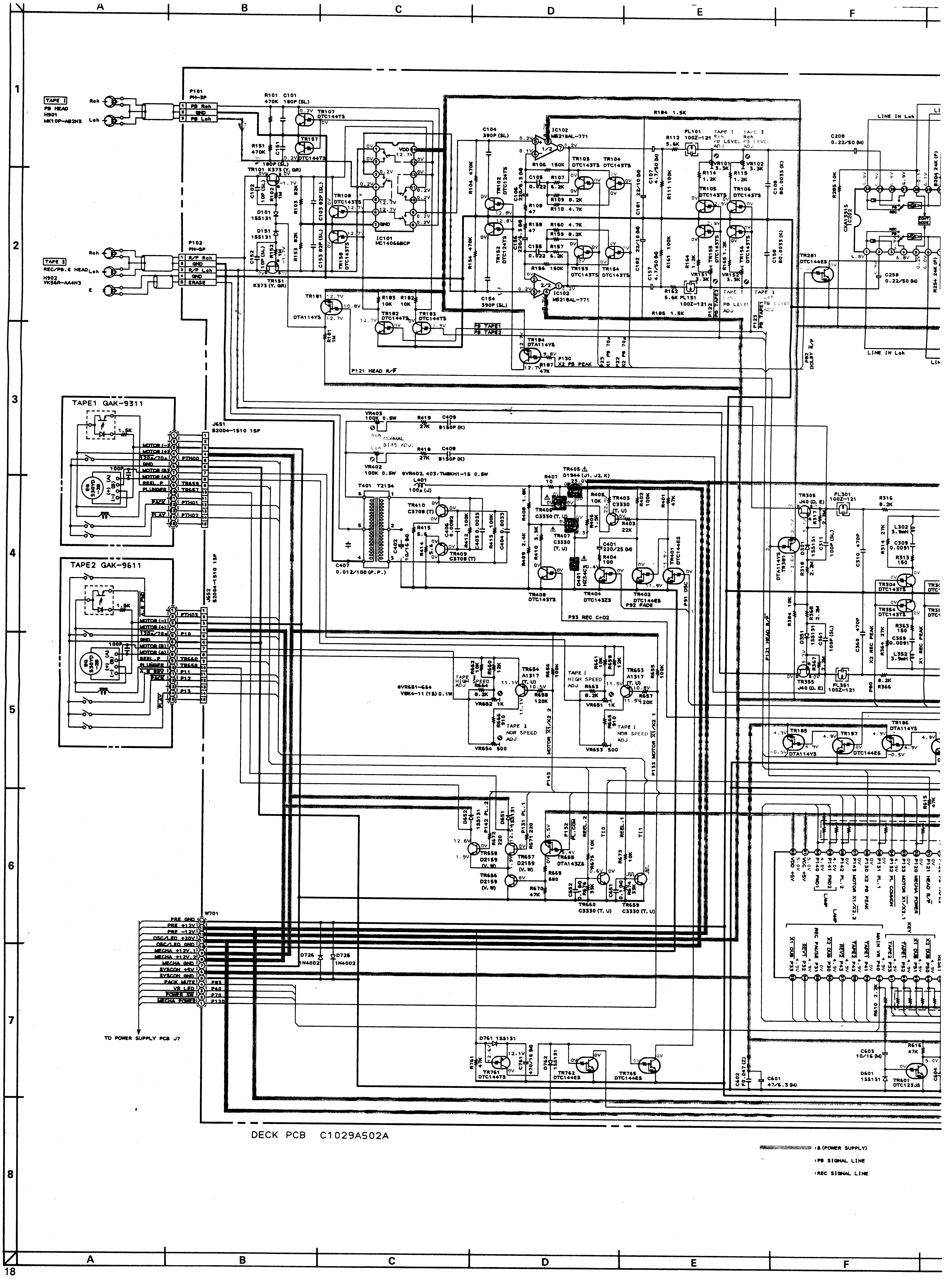
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (J)

INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE USED: NORMAL TYPE, DOLBY SW: OFF)

AX-570
DECK & OPERATION
SCHEMATIC DIAGRAM

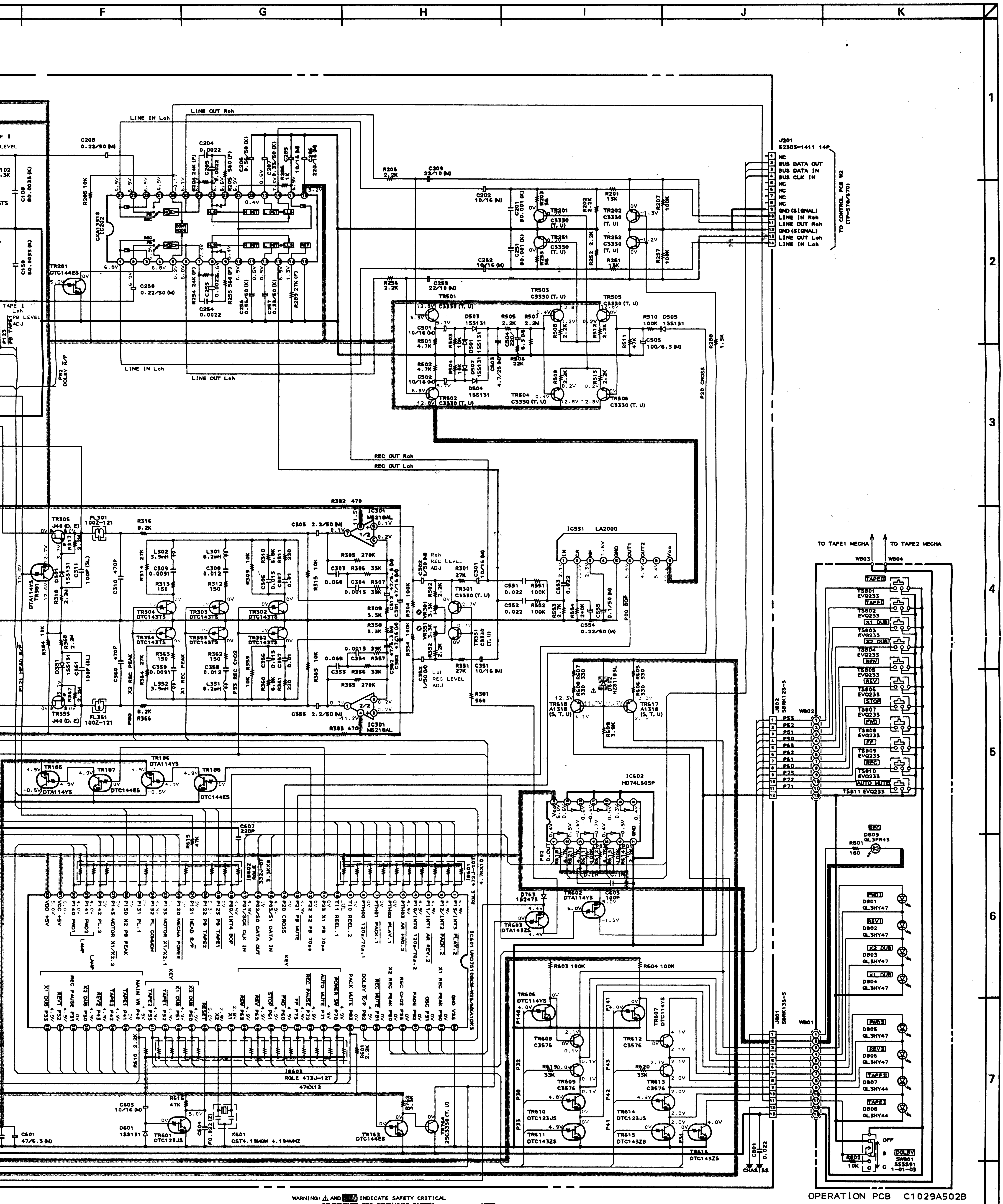
NO.12-9 C103202M
A0


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TAPE I
PB HEAD
H901
MK10P-AB2N3
Rch
Lch
TAPE II
REC/PB.E HEAD
H902
YK56R-AA4N3
E
P101
PH-3P
PB Rch
GND
PB Lch
P102
PH-5P
R/P Rch
R/P Lch
ERASE
IC101
MC14066BCP
IC102
M5218AL-771
TR107 DTC144TS
TR157 DTC144TS
TR101 K373 (Y, GR)
TR151 K373 (Y, GR)
TR181 DTA114YS
TR182 DTC144TS
TR183 DTC144TS
TR184 DTA114YS
TR108 DTC143TS
TR158 DTC143TS
TR102 DTC124TS
TR152 DTC124TS
TR103 DTC143TS
TR104 DTC143TS
TR153 DTC143TS
TR154 DTC143TS
TR105 DTC143TS
TR106 DTC143TS
TR155 DTC143TS
TR156 DTC143TS
TR281 DTC144ES
FL101 100Z-121
FL151 100Z-121
TAPE I Rch PB LEVEL ADJ
TAPE I Lch PB LEVEL ADJ
PB TAPE1
PB TAPE2
P121 HEAD R/F
P130 X2 PB PEAK
P82 DOLBY R/P
LINE IN Lch
TAPE1 GAK-9311
TAPE2 GAK-9611
J651 S2004-1510 15P
J652 S2004-1510 15P
MOTOR (−)
MOTOR (+)
120s/70s
GND
MOTOR (B)
MOTOR (A)
REEL.P
PLUNGER
PACK
PLAY
A.R.REV
PTH00
PTH01
PTH02
PTH03
TR659
TR657
TR660
TR658
P10
P11
P12
P13
VR403 100K 0.5W
VR402 100K 0.5W
Rch NORMAL BIAS ADJ.
Lch
*VR402, 403:TM8KH1-15 0.5W
T401 T2134
L401 100μ (J)
TR410 C3708 (T)
TR409 C3708 (T)
TR405 D1944 (J1, J2, K)
TR406 C3330 (T, U)
TR407 C3330 (T, U)
TR403 C3330 (T, U)
TR408 DTC143TS
TR404 DTC143ZS
TR402 DTC144ES
TR401 DTC144ES
D401 HZ5AC3
P93 REC CrO2
P92 FADE
P91 OSC
*VR651-654 VBK4-11 (15) 0.1W
TR654 A1317 (T, U)
TR653 A1317 (T, U)
TAPE II HIGH SPEED ADJ
TAPE I HIGH SPEED ADJ
TAPE II NOR SPEED ADJ
TAPE I NOR SPEED ADJ
VR654 500
VR653 500
VR652 1K
VR651 1K
MOTOR X1/X2.2
P133 MOTOR X1/X2.1
P143
TR656 D2159 (V, W)
TR658 D2159
TR657 D2159 (V, W)
TR655 DTA143ZS
TR660 C3330 (T, U)
TR659 C3330 (T, U)
D652 1SS131
D651 1SS131
P142 PL.2
P131 PL.1
P132 PL.COM
REEL.2
REEL.1
TI0
TI1
W701
PRE GND
PRE +12V
PRE −12V
OSC/LED +20V
OSC/LED GND
MECHA +12V.1
MECHA +12V.2
MECHA GND
SYSCON +5V
SYSCON GND
PACK MUTE
VR LED
POWER SW
MECHA POWER
P83
P40
P78
P120
D726 1N4002
D725 1N4002
TO POWER SUPPLY PCB J7
D761 1SS131
D762 1SS131
TR761 DTC144TS
TR762 DTC144ES
TR765 DTC144ES
TR305 J40 (D, E)
TR355 J40 (D, E)
TR301 DTA114YS
FL301 100Z-121
FL351 100Z-121
TR304 DTC143TS
TR354 DTC143TS
X2 REC PEAK
X1 REC PEAK
P121 HEAD R/P
TR185 DTA114YS
TR187 DTC144ES
TR186 DTA114YS
TR601 DTC123JS
D601 1SS131
C601 47/6.3
C602
C603 10/16
P120 MECHA POWER
P121 HEAD R/P
P130 X2 PB PEAK
P132 PL.COMMON
P133 MOTOR X1/X2.1
P131 PL.1
P143 MOTOR X1/X2.2
P142 PL.2
P140 PMD1
LAMP
KEY
X1 DUB P33
REC PAUSE P31
X2 DUB P30
REV2 P43
TAPE2 P41
MAIN VR PW
TAPE2 P53
X1 DUB P51
X2 DUB P50
DECK PCB C1029A502A

: B (POWER SUPPLY)

: PB SIGNAL LINE

: REC SIGNAL LINE


F
G
H
I
J
K
1
2
3
4
5
6
7
LINE IN Loh
LINE OUT Roh
LINE IN Loh
LINE OUT Loh
J201
S2303-1411 14P
NC
BUS DATA OUT
BUS DATA IN
BUS CLK IN
NC
NC
NC
GND (SIGNAL)
LINE IN Roh
LINE OUT Roh
GND (SIGNAL)
LINE OUT Loh
LINE IN Loh
TO CONTROL PCB W2 (TP-670/670)
CXA1331S IC202
TR201 DTC144ES
TR201 C3330
TR251 C3330
TR202 C3330 (T, U)
TR252 C3330 (T, U)
TR501 C3330 (T, U)
TR502 C3330 (T, U)
TR503 C3330 (T, U)
TR504 C3330 (T, U)
TR505 C3330 (T, U)
TR506 C3330 (T, U)
P20 CROSS
REC OUT Roh
REC OUT Loh
IC301 M5218AL
IC551 LA2000
TR305 J40 (D, E)
TR355 J40 (D, E)
FL301 100Z-121
FL351 100Z-121
TR301 DTA114YS
TR304 DTC143TS
TR303 DTC143TS
TR302 DTC143TS
TR354 DTC143TS
TR353 DTC143TS
TR352 DTC143TS
Rch REC LEVEL ADJ
Loh REC LEVEL ADJ
TR301 C3330 (T, U)
TR351 C3330 (T, U)
X2 REC PEAK
X1 REC PEAK
P93 REC C-D2
P121 HEAD R/P
TR618 A1318 (S, T, U)
TR617 A1318 (S, T, U)
HZS11B3L
TO TAPE1 MECHA
TO TAPE2 MECHA
W803
W804
J802 S8NK12S-5
W802
TS801 EVQ233 TAPE2
TS802 EVQ233 TAPE1
TS803 EVQ233 X1 DUB
TS804 EVQ233 X2 DUB
TS805 EVQ233 REW
TS806 EVQ233 REV
TS807 EVQ233 STOP
TS808 EVQ233 FWD
TS809 EVQ233 FF
TS810 EVQ233 REC
TS811 EVQ233 AUTO MUTE
TR185 DTA114YS
TR187 DTC144ES
TR186 DTA114YS
TR188 DTC144ES
IC602 HD74LS05P
REC D809 GL3PR43
R801 180
IC601 UPD75108CW-W25/MX410K5
D763 1S2473
TR602 DTA114YS
TR603 DTA143ZS
R603 100K
R604 100K
TR606 DTC114YS
TR607 DTC114YS
TR608 C3576
TR609 C3576
TR610 DTC123JS
TR611 DTC143ZS
TR612 C3576
TR613 C3576
TR614 DTC123JS
TR615 DTC143ZS
TR616 DTC143ZS
J801 S8NK13S-5
W801
FWD D801 GL3HY47
REV D802 GL3HY47
x2 DUB D803 GL3HY47
x1 DUB D804 GL3HY47
FWD D805 GL3HY47
REV D806 GL3HY47
TAPE2 D807 GL3HY44
TAPE1 D808 GL3HY44
C801 0.022
CHASISS
OFF
B
C
DOLBY SW801 SSSS91 1-01-03
R802 10K
RB602 RGLE 473J-12T 47KX12
RB601
C601 47/6.3 (M)
D601 1SS131
TR601 DTC123JS
C604 F0.022 (Z)
X601 CST4.19MGW 4.194MHZ
TR763 DTC144ES
TR764 2SC3330

OPERATION PCB C1029A502B

▬ : B (POWER SUPPLY)

: PB SIGNAL LINE

: REC SIGNAL LINE

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (J)

INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE USED: NORMAL TYPE, DOLBY SW: OFF)

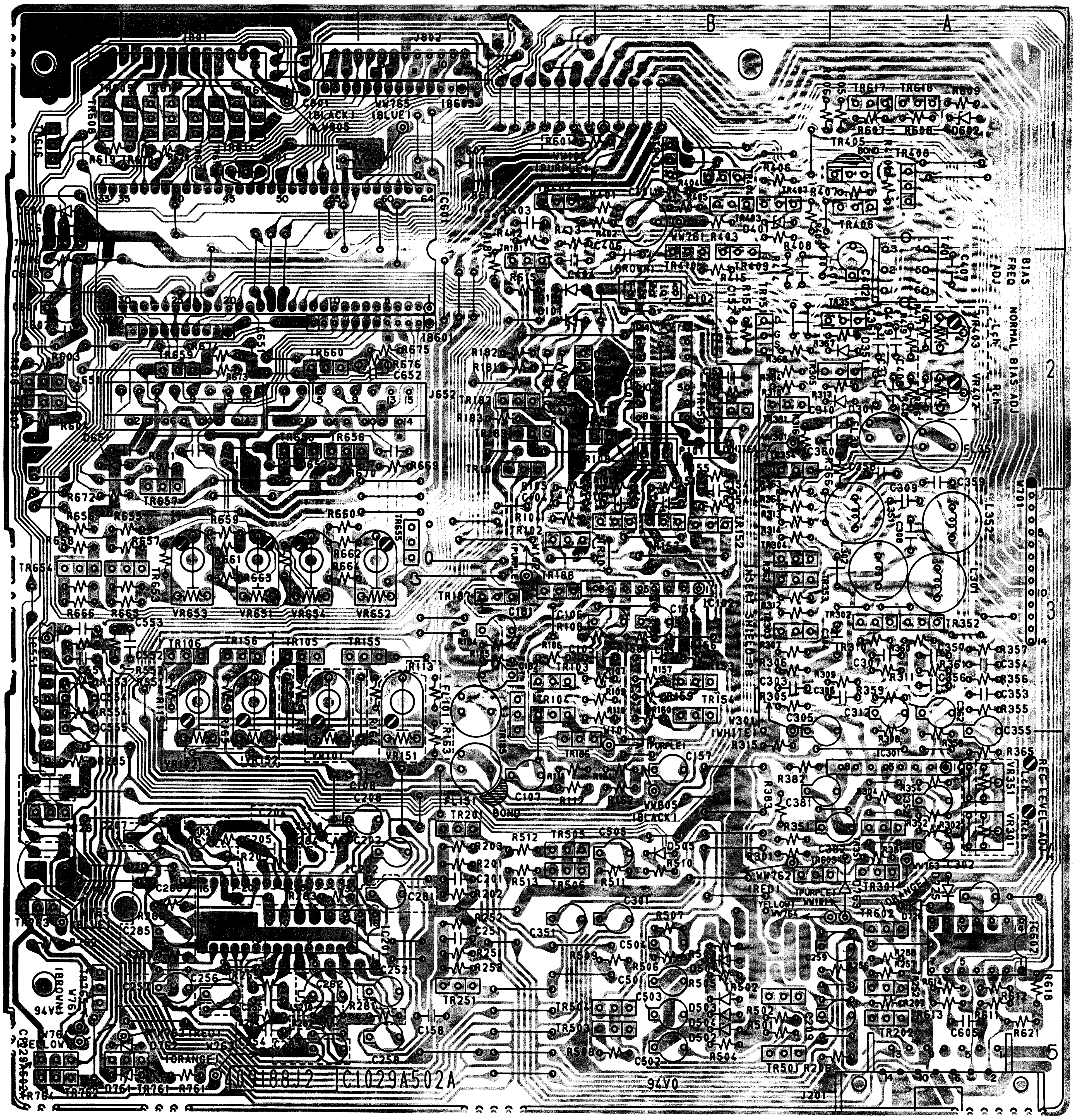
8

AX-670
DECK & OPERATION
SCHEMATIC DIAGRAM

NO.12-10 C103203M

A0

F G H I J K


A
B
1
2
3
5
J801
J802
BIAS FREQ ADJ
NORMAL BIAS ADJ
REC LEVEL ADJ
Lch
Rch
VR651
VR652
VR653
VR654
VR101
VR151
VR301
VR351
IC301
IC602
J201
W701
94V0
IC1029A502A

DECK PCB C1029A502AJ2

PRINCIPAL PAR

ICs

IC101	B2
IC102	B3
IC201	C,
IC202	D4
IC301	A4
IC551	E3
IC601	D1
IC602	A4

WIREs

W701	A3
J201	A5
J651	D2
J652	C,
J801	D1
J802	C1

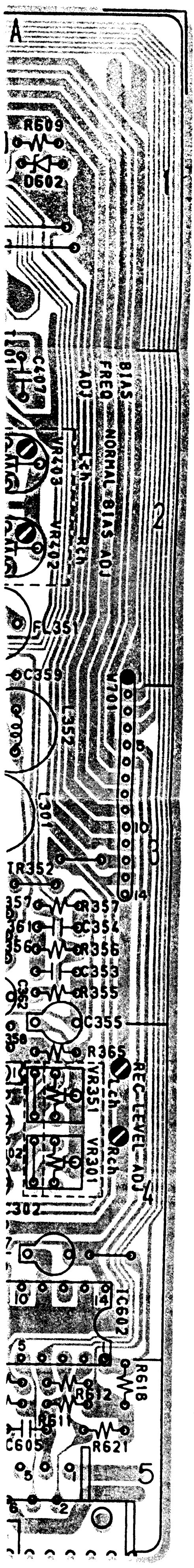
CONNECTORs

P101	B2
P102	B2

TRANSISTORs

TR101	B,
TR102	C3
TR103	C3
TR104	C3
TR105	D3
TR106	D3
TR107	B,
TR108	B,
TR151	B2
TR152	B3
TR153	B3
TR154	B3
TR155	C,
TR156	D3
TR157	B3
TR158	B2
TR181	C2
TR182	C2
TR183	C2
TR184	C2
TR185	B,
TR186	B,
TR187	C3
TR188	C3
TR201	C4
TR202	A5
TR251	C5
TR252	A5
TR281	E4
TR301	A4
TR302	A3
TR303	B3

NOTE : PARTS DIFFER DEPENDING ON MODEL N
REFER TO SCHEMATIC DIAGRAMS FOR PEF
PARTS INFORMATION.


A
R609
D602
BIAS FREQ ADJ
NORMAL BIAS ADJ
VR403
VR402
2
W701
L352
L301
3
TR352
C359
C354
C353
R355
C355
R365
VR351
VR301
REC LEVEL ADJ
IC602
R618
R612
R621
C605
5

PRINCIPAL PARTS LOCATION

ICs

IC101	B2
IC102	B3
IC201	C,D4
IC202	D4
IC301	A4
IC551	E3
IC601	D1,2
IC602	A4

WIREs

W701	A3
J201	A5
J651	D2
J652	C,D2
J801	D1
J802	C1

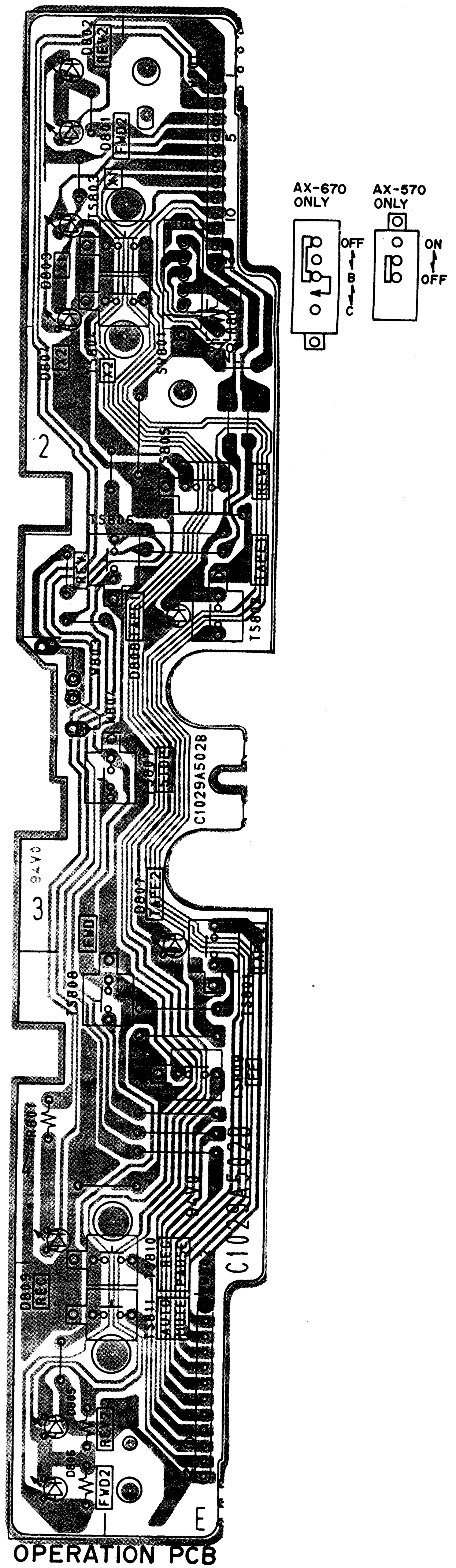
CONNECTORs

P101	B2
P102	B2

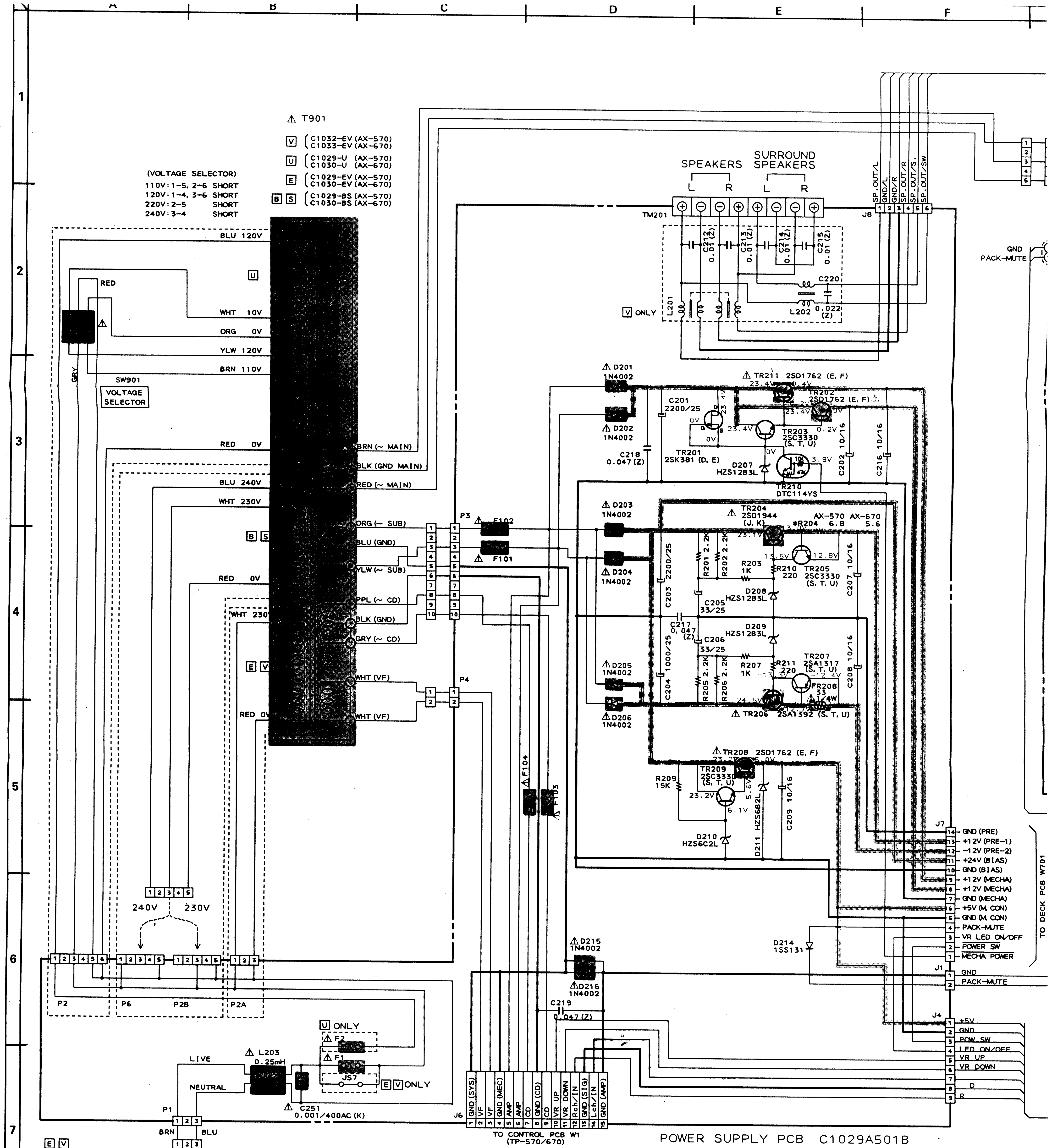
TRANSISTORs

TR101	B,C2
TR102	C3
TR103	C3
TR104	C3
TR105	D3
TR106	D3
TR107	B,C3
TR108	B,C2
TR151	B2
TR152	B3
TR153	B3
TR154	B3
TR155	C,B3
TR156	D3
TR157	B3
TR158	B2
TR181	C2
TR182	C2
TR183	C2
TR184	C2
TR185	B,C4
TR186	B,C4
TR187	C3
TR188	C3
TR201	C4
TR202	A5
TR251	C5
TR252	A5
TR281	E4
TR301	A4
TR302	A3
TR303	B3
TR304	B3
TR305	A,B2
TR351	A4
TR352	A3
TR353	B3
TR354	B2
TR355	A,B2
TR381	B2
TR401	B1
TR402	C1
TR403	B1
TR404	B1
TR405	A1
TR406	A1
TR407	B1
TR408	A1
TR409	B2
TR410	B1,2
TR501	B5
TR502	B5
TR503	B,C5
TR504	B,C5
TR505	C4
TR506	C4
TR601	E1,2
TR602	A4
TR603	B4
TR606	E2
TR607	E2
TR608	E1
TR609	D1
TR610	D1
TR611	D1
TR612	D1
TR613	D1
TR614	D1
TR615	D1
TR616	E1
TR617	A1
TR618	A1
TR653	D,E3
TR654	E3
TR655	C3
TR656	D2
TR657	D2
TR658	D2
TR659	D2
TR660	D2
TR761	D,E5
TR762	E5
TR763	E4
TR764	E5
TR765	E5

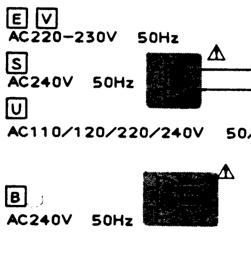
DIFFER DEPENDING ON MODEL NUMBER.
TO SCHEMATIC DIAGRAMS FOR PERTINENT
INFORMATION.


AX-670
ONLY
AX-570
ONLY
OFF
B
C
ON
OFF
D802
REV2
D801
FWD2
TS803
D803
D802
TS801
TS805
TS806
REW
FF
TS804
PLAY
D809
STOP
C1029A502B
D807
TAPE2
FWD
REV
TS809
TS808
R807
D810
TS810
TS811
D805
D806
REC
REV2
FWD2
C1029A502B
2
3
5
10
E

OPERATION PCB
C1029A502BJ2


T901
V (C1032-EV (AX-570) C1033-EV (AX-670)
U (C1029-U (AX-570) C1030-U (AX-670)
E (C1029-EV (AX-570) C1030-EV (AX-670)
B S (C1029-BS (AX-570) C1030-BS (AX-670)
(VOLTAGE SELECTOR)
110V: 1-5, 2-6 SHORT
120V: 1-4, 3-6 SHORT
220V: 2-5 SHORT
240V: 3-4 SHORT
BLU 120V
RED
WHT 10V
ORG 0V
YLW 120V
BRN 110V
GRY
SW901
VOLTAGE SELECTOR
RED 0V
BLU 240V
WHT 230V
RED 0V
WHT 230V
RED 0V
BRN (~ MAIN)
BLK (GND MAIN)
RED (~ MAIN)
ORG (~ SUB)
BLU (GND)
YLW (~ SUB)
PPL (~ CD)
BLK (GND)
GRY (~ CD)
WHT (VF)
WHT (VF)
P3
F102
F101
P4
240V 230V
P2
P6
P2B
P2A
U ONLY
F2
F1
JS7
E V ONLY
L203 0.25mH
LIVE
NEUTRAL
P1
BRN
BLU
C251 0.001/400AC (K)
F104
F103
D215 1N4002
D216 1N4002
C219 0.047 (Z)
J6
GND (SYS)
VF
VF
GND (MEC)
AMP
AMP
CD
GND (CD)
CD
VR UP
VR DOWN
Rch/IN
GND (SIG)
Lch/IN
GND (AMP)
TO CONTROL PCB W1 (TP-570/670)
SPEAKERS
SURROUND SPEAKERS
L R L R
TM201
C212 0.01 (Z)
C213 0.01 (Z)
C214 0.01 (Z)
C215 0.01 (Z)
C220
L201
L202
0.022 (Z)
V ONLY
J8
SP.OUT/L
GND/L
GND/R
SP.OUT/R
SP.OUT/S.
SP.OUT/SW
GND
PACK-MUTE
D201 1N4002
D202 1N4002
C201 2200/25
C218 0.047 (Z)
TR201 2SK381 (D, E)
TR211 2SD1762 (E, F)
TR202 2SD1762 (E, F)
TR203 2SC3330 (S, T, U)
D207 HZS12B3L
TR210 DTC114YS
C202 10/16
C216 10/16
23.4V
0.4V
0.2V
3.9V
0V
D203 1N4002
D204 1N4002
TR204 2SD1944 (J, K)
AX-570 AX-670
*R204 6.8 5.6
23.1V
13.5V
12.8V
R201 2.2K
R202 2.2K
R203 1K
R210 220
TR205 2SC3330 (S, T, U)
C203 2200/25
C207 10/16
D208 HZS12B3L
C205 33/25
C217 0.047 (Z)
D209 HZS12B3L
C206 33/25
D205 1N4002
D206 1N4002
C204 1000/25
R205 2.2K
R206 2.2K
R207 1K
R211 220
TR207 2SA1317 (S, T, U)
FR208 33 1/4W
C208 10/16
-13.5V
-12.4V
-24.5V
TR206 2SA1392 (S, T, U)
TR208 2SD1762 (E, F)
TR209 2SC3330 (S, T, U)
R209 15K
23.2V
6.1V
5.6V
D210 HZS6C2L
D211 HZS6B2L
C209 10/16
J7
GND (PRE)
+12V (PRE-1)
-12V (PRE-2)
+24V (BIAS)
GND (BIAS)
+12V (MECHA)
+12V (MECHA)
GND (MECHA)
+5V (M. CON)
GND (M. CON)
PACK-MUTE
VR LED ON/OFF
POWER SW
MECHA POWER
TO DECK PCB W701
D214 1SS131
J1
GND
PACK-MUTE
J4
+5V
GND
POW. SW
LED ON/OFF
VR UP
VR DOWN
D
R

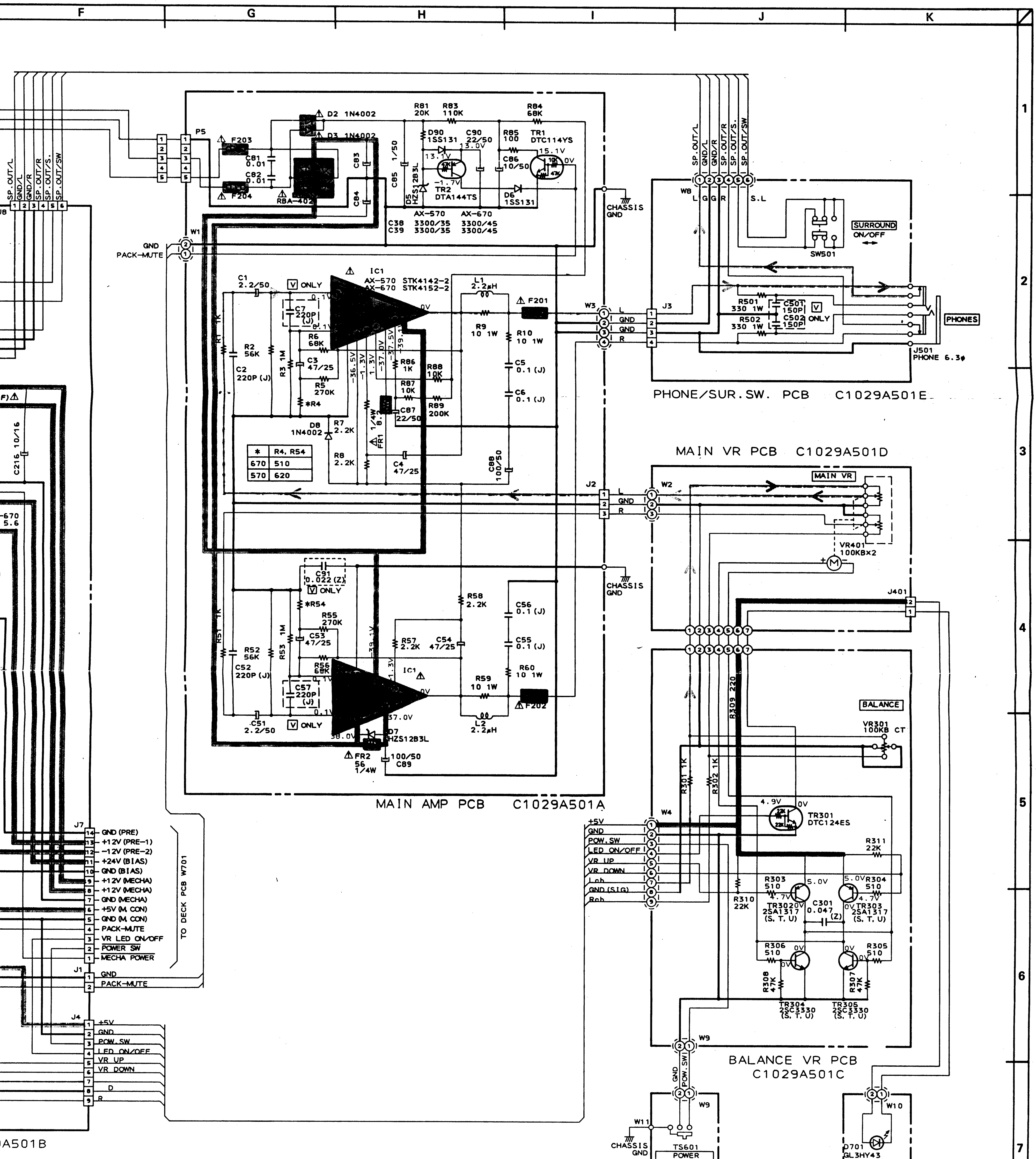
POWER SUPPLY PCB C1029A501B


E V
AC220-230V 50Hz
S
AC240V 50Hz
P1
U
AC110/120/220/240V 50/60Hz
B
AC240V 50Hz

FUSE No.	F1	F2	F101	F102	F103	F104	F201	F202	F203	F204
AX-670 E V	—	—	T1.6A	T1.6A	T630mA	T630mA	T3, 15A	T3, 15A	T4.0A	T4.0A
AX-670 B S	T1, 6A	—	T1.6A	T1.6A	T630mA	T630mA	T3, 15A	T3, 15A	T4.0A	T4.0A
AX-670 U	T1, 6A	T1, 6A	T1.6A	T1.6A	T630mA	T630mA	T3, 15A	T3, 15A	T4.0A	T4.0A
AX-570 E V	—	—	T1.6A	T1.6A	T630mA	T630mA	T2, 5A	T2, 5A	T3.15A	T3.15A
AX-570 B S	T1, 25A	—	T1.6A	T1.6A	T630mA	T630mA	T2, 5A	T2, 5A	T3.15A	T3.15A
AX-570 U	T1, 25A	T1, 25A	T1.6A	T1.6A	T630mA	T630mA	T2, 5A	T2, 5A	T3.15A	T3.15A

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


F
G
H
I
J
K
1
2
3
4
5
6
7
P5
F203
F204
C81 0.01
C82 0.01
RBA-402
D2 1N4002
D3 1N4002
C83
C84
C85 1/50
R81 20K
R83 110K
R84 68K
D90 1SS131
C90 22/50
R85 100
TR1 DTC114YS
C86 10/50
D5 HZS12B3L
TR2 DTA144TS
D6 1SS131
AX-570
AX-670
C38 3300/35
C39 3300/35
3300/45
3300/45
CHASSIS GND
W1
GND
PACK-MUTE
IC1
AX-570 STK4142-2
AX-670 STK4152-2
C1 2.2/50
V ONLY
C7 220P (J)
R1 1K
R2 56K
C2 220P (J)
R3 1M
R6 68K
C3 47/25
R5 270K
*R4
D8 1N4002
R7 2.2K
R8 2.2K
R86 1K
R87 10K
R88 10K
R89 200K
C87 22/50
FR1 8.2 1/4W
C4 47/25
L1 2.2µH
F201
R9 10 1W
R10 10 1W
C5 0.1 (J)
C6 0.1 (J)
C88 100/50
W3
L
GND
R
J3
SP.OUT/L
GND/L
GND/R
SP.OUT/R
SP.OUT/S.
SP.OUT/SW
W8
S.L
SURROUND ON/OFF
SW501
R501 330 1W
R502 330 1W
C501 150P
C502 150P
V ONLY
PHONES
J501 PHONE 6.3φ
PHONE/SUR.SW. PCB C1029A501E
MAIN VR PCB C1029A501D
J2
W2
MAIN VR
VR401 100KBx2
M
C91 0.022 (Z)
*R54
R55 270K
C53 47/25
R51 1K
R52 56K
C52 220P (J)
R53 1M
R56 68K
C57 220P (J)
C51 2.2/50
R57 2.2K
C54 47/25
R58 2.2K
C56 0.1 (J)
C55 0.1 (J)
R59 10 1W
R60 10 1W
L2 2.2µH
F202
D7 HZS12B3L
FR2 56 1/4W
C89 100/50
*
R4, R54
670
510
570
620
MAIN AMP PCB C1029A501A
J401
R309 220
BALANCE
VR301 100KB CT
R301 1K
R302 1K
W4
+5V
GND
POW. SW
LED ON/OFF
VR UP
VR DOWN
Lch
GND (SIG)
Rch
TR301 DTC124ES
R311 22K
R303 510
R304 510
R310 22K
TR302 2SA1317 (S, T, U)
TR303 2SA1317 (S, T, U)
C301 0.047 (Z)
R306 510
R305 510
R308 47K
R307 47K
TR304 2SC3330 (S, T, U)
TR305 2SC3330 (S, T, U)
W9
BALANCE VR PCB C1029A501C
W11
TS601
POWER ON/STANDBY
POWER SW PCB C1029A501F
W10
D701 GL3HY43
INDICATOR (VR)
LED PCB C1029A501G
J7
GND (PRE)
+12V (PRE-1)
-12V (PRE-2)
+24V (BIAS)
GND (BIAS)
+12V (MECHA)
+12V (MECHA)
GND (MECHA)
+5V (M. CON)
GND (M. CON)
PACK-MUTE
VR LED ON/OFF
POWER SW
MECHA POWER
TO DECK PCB W701
J1
J4
C215 10/16
A501B

▬ :B (POWER SUPPLY) LINE

:AUDIO SIGNAL LINE

ICATE SAFETY CRITICAL
R CONTINUED SAFETY.
Y CRITICAL COMPONENTS
UFACTURER' S RECOMMENDED

, ILS INDIQUENT LES
RITIQUES DE SÉCURITÉ,
R LE DEGRÉ DE SÉCURITÉ
NE REMPLACER QUE DES
ANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE MEASURED
WHEN NO SIGNAL WAS BEING INPUT.
(FUNCTION: STOP MODE, MODEL: AX-670)

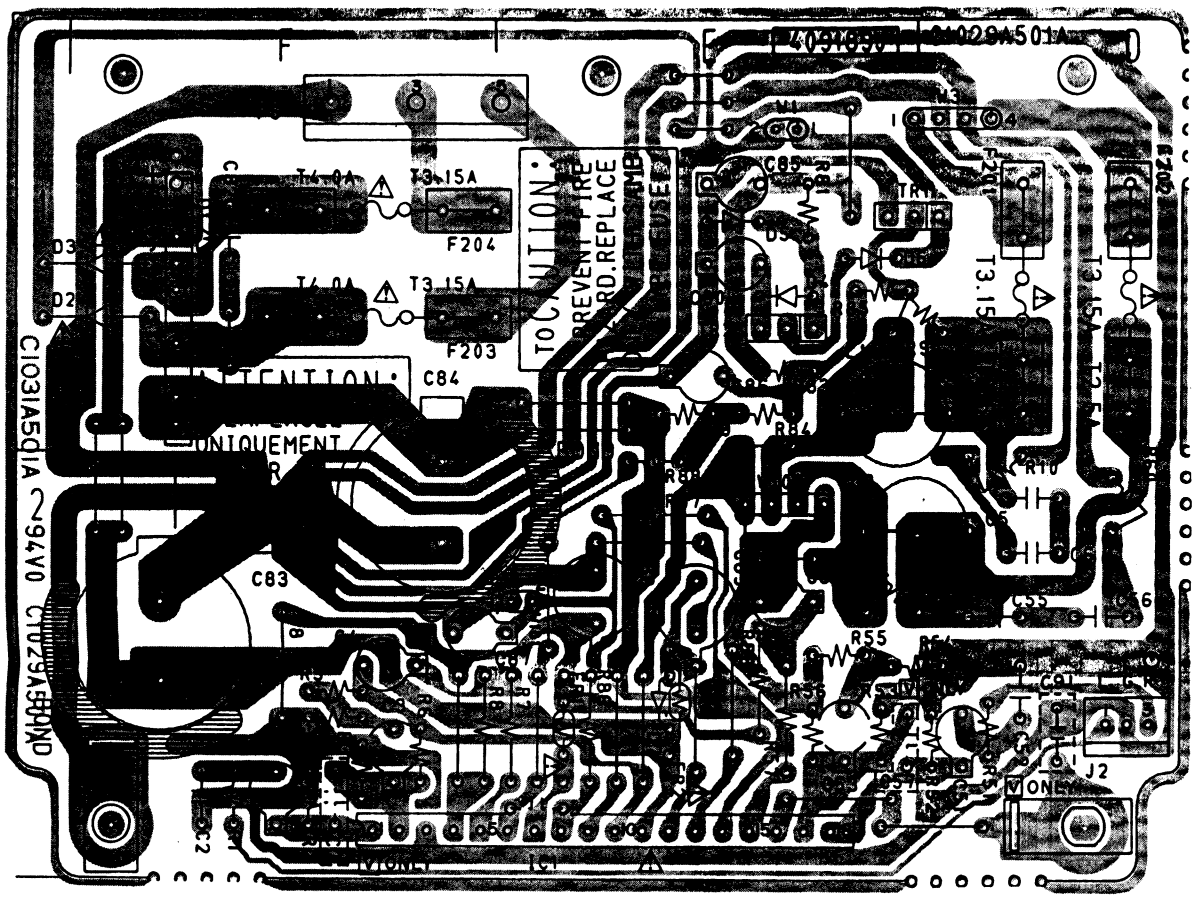
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN µF 50WV (M)

AX-570/670
MAIN
SCHEMATIC DIAGRAM

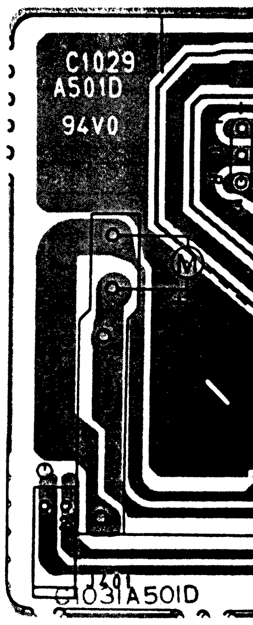
No.12-11 C103204M
A1

F G H I J K

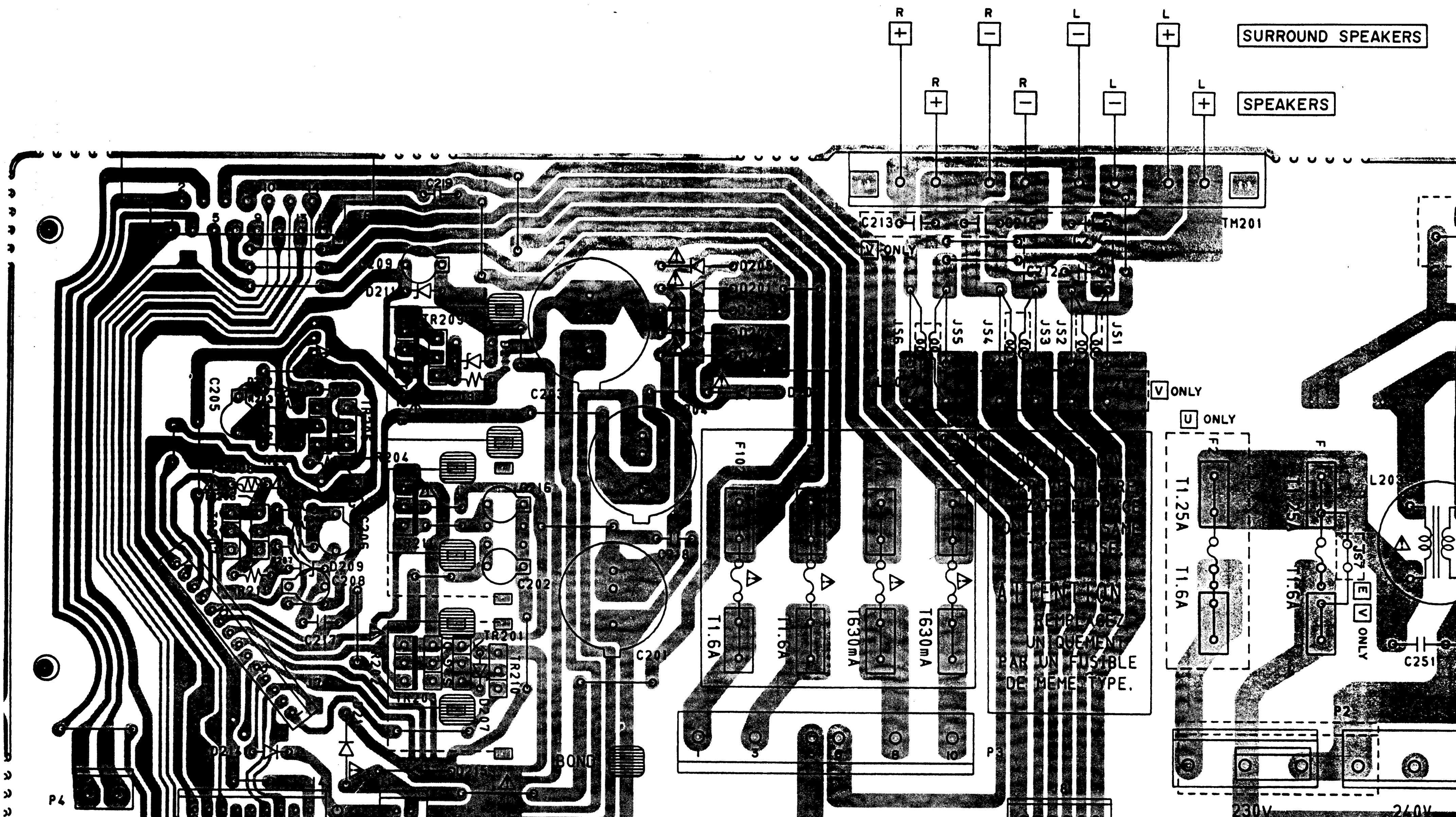
8


F
C1029A501A
T4.0A
T3.15A
F204
F203
C84
C83
C89
TR11
R10
R55
C55
CAUTION
ATTENTION
UNIQUEMENT
C1031A501A
94V0
C1029A501AND
J2
V ONLY

MAIN AMP PCB C1029A501AJ2


C1029
A501D
94V0
J401
C1031A501D

MAIN VR
C1029A501D

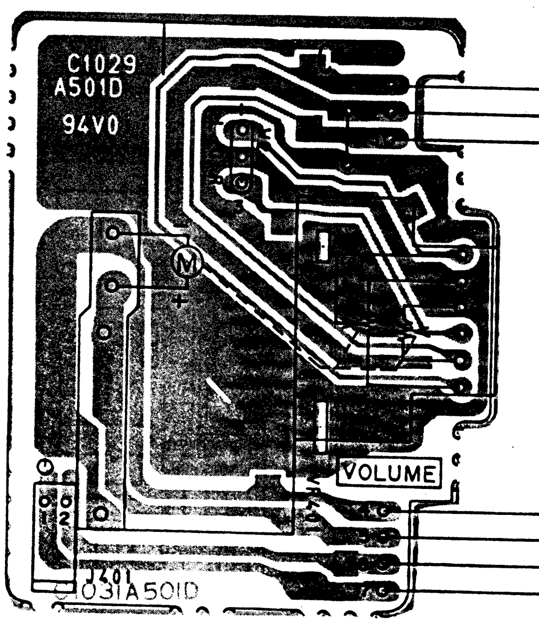

R
+
R
−
L
−
L
+
SURROUND SPEAKERS
R
+
R
−
L
−
L
+
SPEAKERS
C213
TM201
V ONLY
C219
D211
TR209
C205
C206
D209
C208
C217
TR201
TR210
C202
C201
C203
D205
D204
R204
F101
JS6
JS5
JS4
JS3
JS2
JS1
V ONLY
U ONLY
T1.25A
T1.6A
T1.6A
T1.6A
T630mA
T630mA
T1.6A
T1.6A
ATTENTION
REMPLACEZ UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE.
L203
C251
E
V ONLY
P2
P3
P4
230V
240V
C1029
A501B
F
E
D
C
B

POWER SUPPLY PCB C1029A501BJ2

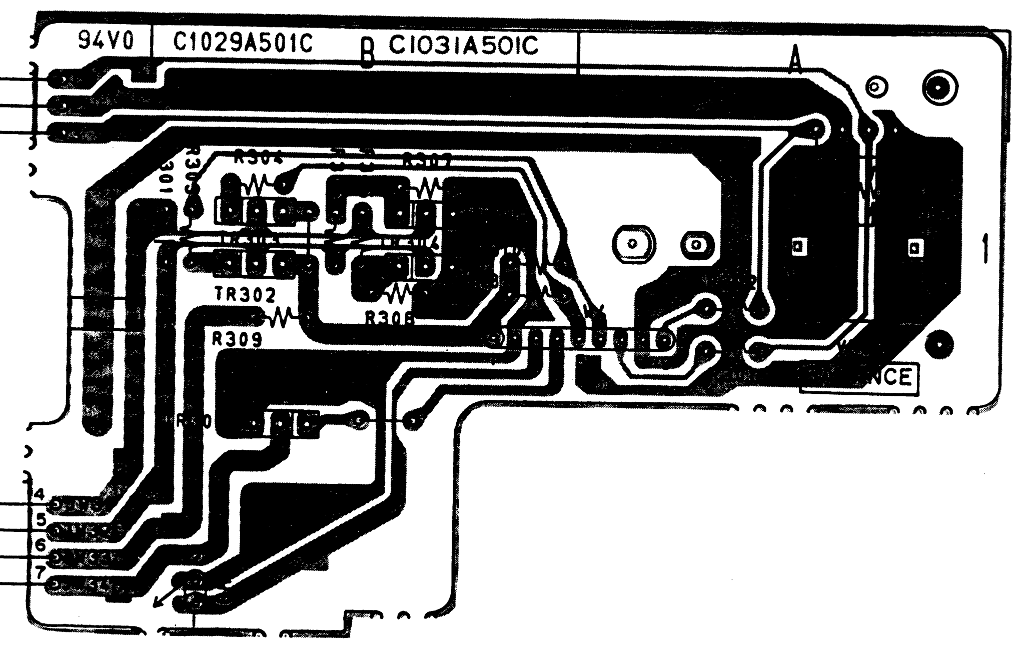
NOTE : PARTS DIFFER DEPEN
REFER TO SCHEMATIC
PARTS INFORMATION.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

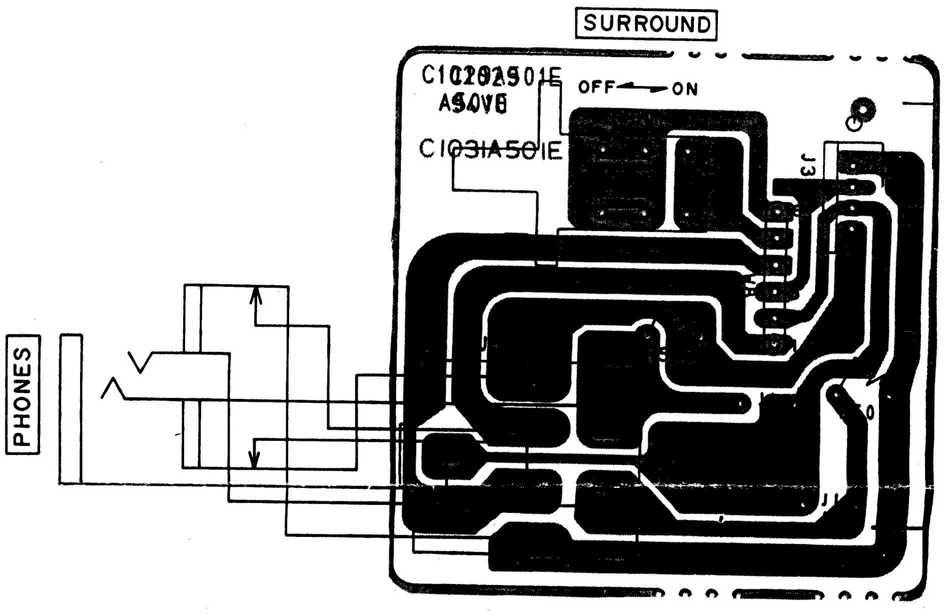
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


C1029
A501D
94V0
M
+
VOLUME
1
2
J201
C031A501D

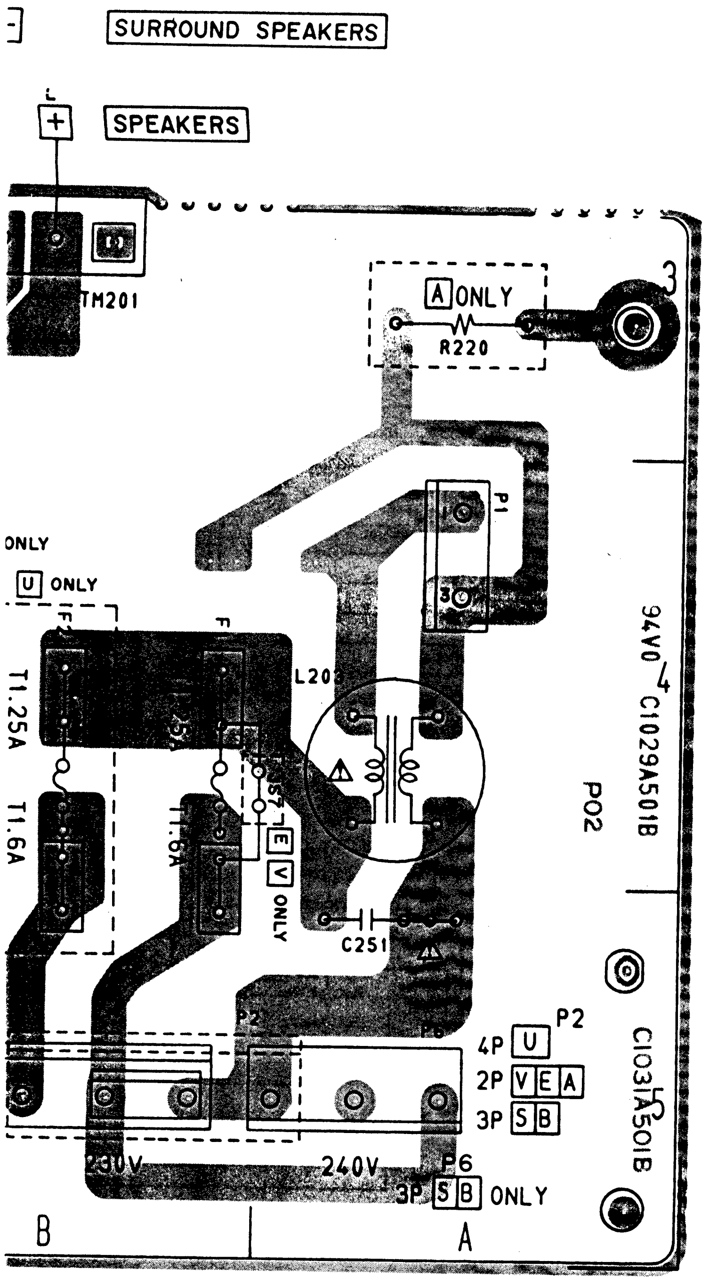
MAIN VR PCB
C1029A501DJ2


94V0
C1029A501C
B
C1031A501C
A
R304
R302
R303
R301
TR302
R309
R306
R310
1
4
5
6
7
BALANCE

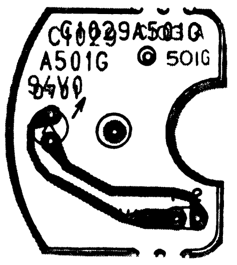
BALANCE VR PCB
C1029A501CJ2


SURROUND
C1029A501E
A501E
94V0
C1031A501E
OFF ⟵ ON
J3
J1
PHONES

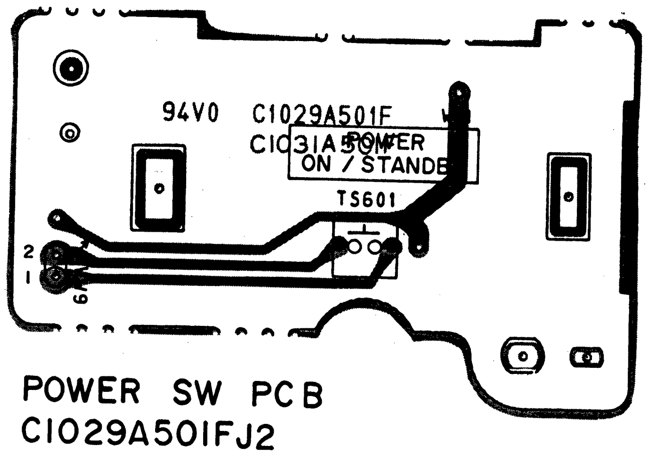
PHONE / SUR. SW PCB
C1029A501EJ2


SURROUND SPEAKERS
+
SPEAKERS
TM201
A ONLY
R220
3
P1
3
ONLY
U ONLY
F2
F1
T1.25A
T1.6A
T1.6A
L201
E V ONLY
C251
94V0
C1029A501B
P02
4
C1031A501B
5
P2
4P U
2P V E A
3P S B
230V
240V
P6
3P S B ONLY
B
A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.

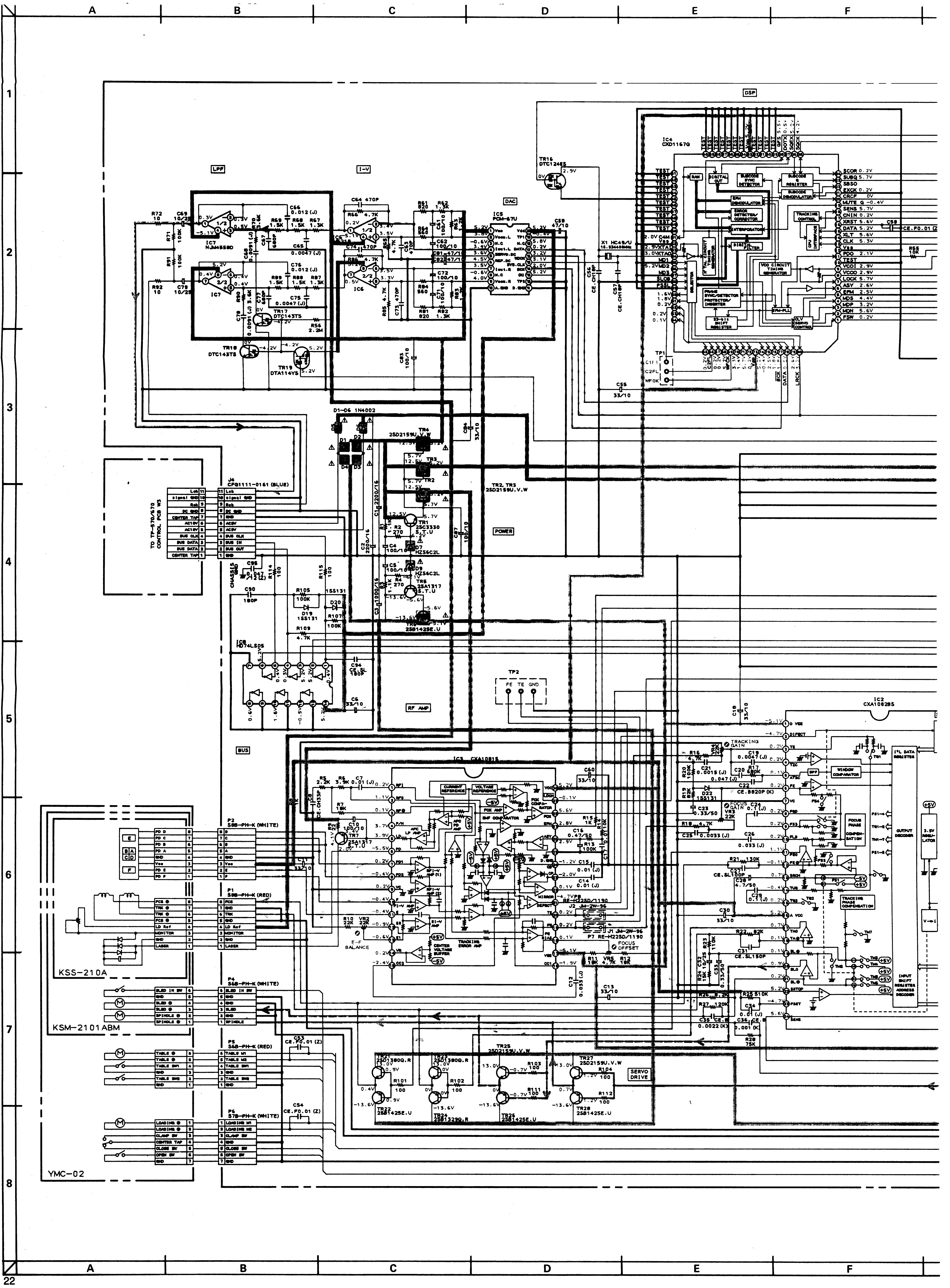

C1029A501G
A501G
94V0
501G
2

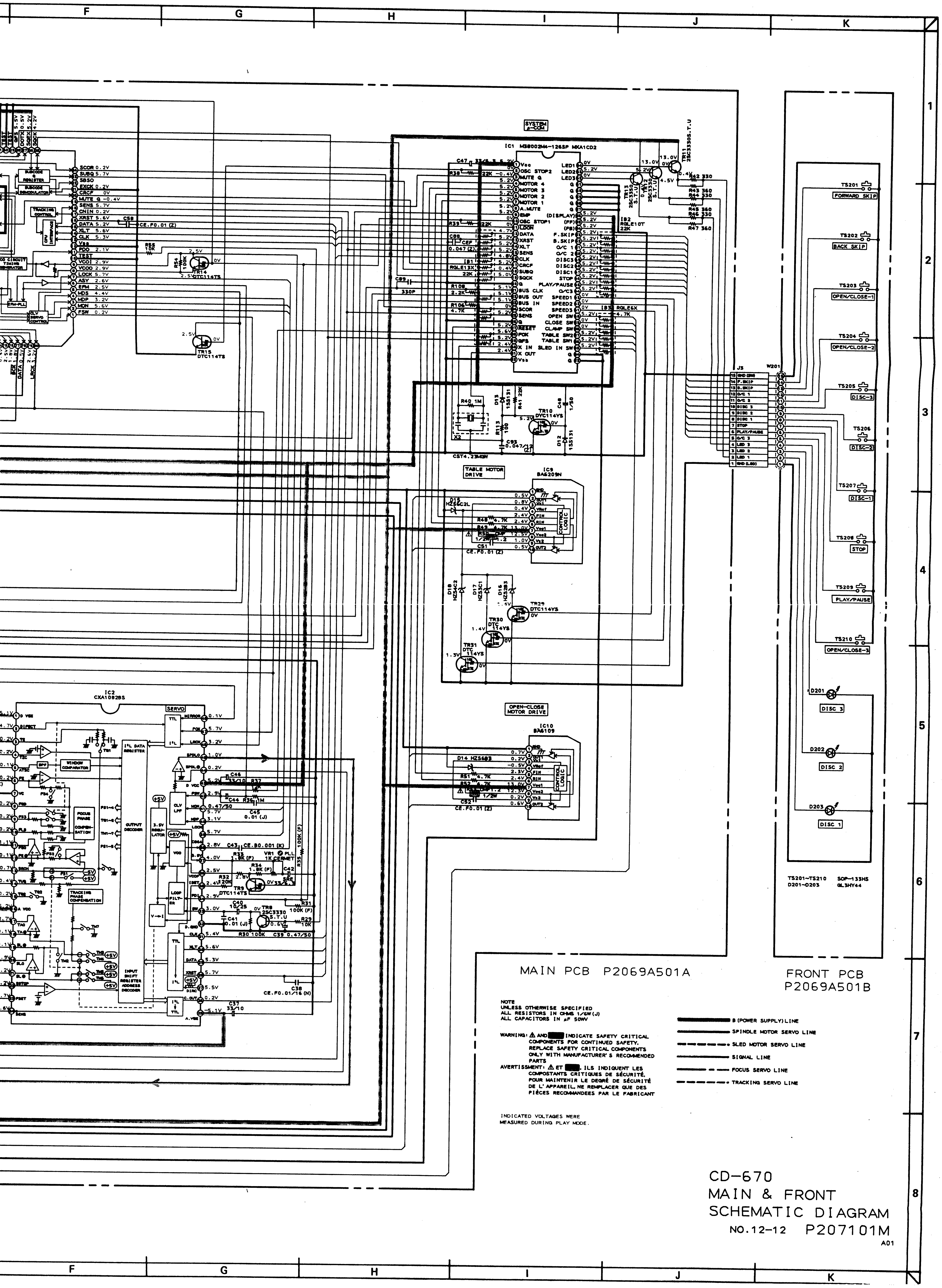
LED PCB
C1029A501GJ2


94V0
C1029A501F
C1031A501F
POWER
ON / STANDBY
TS601
2
1
9

POWER SW PCB
C1029A501FJ2

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTAINING
PARTS INFORMATION.


A
B
C
D
E
F
1
2
3
4
5
6
7
8
LPF
I-V
DAC
DSP
IC4 CXD1167Q
IC5 PCM-67U
IC7 NJM4558D
IC6
TR16 DTC124ES
TR17 DTC143TS
TR18 DTC143TS
TR19 DTA114YS
X1 HC49/U 16.9344MHz
D1-D6 1N4002
TR4 2SD2159U.V.W
TR2, TR3 2SD2159U.V.W
TR1 2SC3330 S.T.U
TR5 2SA1317 S.T.U
TR6 2SB1425E.U
D7 HZS6C2L
D9 HZS6C2L
POWER
J4 CFG1111-0161 (BLUE)
TO TP-570/670 CONTROL PCB W3
Lch
signal GND
Rch
DC GND
CENTER TAP
AC18V
BUS CLK
BUS DATA
CENTER TAP
IC8 HD74LS05
D19 1SS131
D20 1SS131
CHASSIS
RF AMP
TP2
FE
TE
GND
BUS
IC3 CXA1081S
CURRENT REFERENCE
VOLTAGE REFERENCE
FOK AMP
FOK COMPARATOR
EMF COMPARATOR
APC
LD AMP
RF I-V AMP
MIRROR
DEFECT
TRACKING ERROR AMP
CENTER VOLTAGE BUFFER
E-F BALANCE
FOCUS OFFSET
TR7 2SA1317
J1 JM-2W-96
J2 JM-2W-96
P7 RE-H225D/1190
P2 S8B-PH-K (WHITE)
P1 S8B-PH-K (RED)
PD D
PD C
PD B
PD A
GND
Vcc
PD E
PD F
FCS
TRK
LD Ref
MONITOR
LASER
KSS-210A
P4 S6B-PH-K (WHITE)
SLED IN SW
SLED
SPINDLE
KSM-2101ABM
P5 S6B-PH-K (RED)
TABLE M1
TABLE M2
TABLE SW1
TABLE SW2
P6 S7B-PH-K (WHITE)
LOADING M1
LOADING M2
CLAMP SW
CLOSE SW
OPEN SW
YMC-02
TR21 2SD1380Q.R
TR22 2SB1425E.U
TR23 2SD1380Q.R
TR24 2SB1329Q.R
TR25 2SD2159U.V.W
TR26 2SB1425E.U
TR27 2SD2159U.V.W
TR28 2SB1425E.U
SERVO DRIVE
IC2 CXA1082BS
TRACKING GAIN
FOCUS GAIN
WINDOW COMPARATOR
FOCUS PHASE COMPENSATION
TRACKING PHASE COMPENSATION
I²L DATA REGISTER
OUTPUT DECODER
3.5V REGULATOR
INPUT SHIFT REGISTER ADDRESS DECODER
D22 1SS131
TP1
C2FL
WFCK
SCOR
SUBQ
SBSO
EXCK
CRCF
MUTE
SENS
CNIN
XRST
DATA
XLT
CLK
PDO
VCOI
VCOO
LOCK
ASY
EFM
MDS
MDP
MON
FSW
RAM
DIGITAL OUT
SUBCODE SYNC DETECTOR
SUBCODE Q REGISTER
SUBCODE DEMODULATOR
EFM DEMODULATOR
ERROR DETECTOR/CORRECTOR
INTERPOLATOR
DIGITAL FILTER
TRACKING CONTROL
CPU INTERFACE
VCO CIRCUIT TIMING GENERATOR
FRAME SYNC/DETECTOR PROTECTOR/INSERTER
EFM-PLL
CLV SERVO CONTROL
32-bit SHIFT REGISTER
X'TAL CIRCUIT TIMING GENERATOR
SELECTOR
BCK
DATA
LRCK


F
G
H
I
J
K
1
2
3
4
5
6
7
8
SYSTEM µ-COM
IC1 MS8002M4-126SP MXA1CD2
TABLE MOTOR DRIVE
IC9 BA6209N
OPEN-CLOSE MOTOR DRIVE
IC10 BA6109
IC2 CXA1082BS
SERVO
TR10 DTC114YS
TR11 2SC3330S.T.U
TR14 DTC114TS
TR15 DTC114TS
TR29 DTC114YS
TR30 DTC114YS
TR31 DTC114YS
TR9 DTC114TS
TR8 2SC3330 S.T.U
X2 CST4.23MGW
VR1 PLL 1K CERMET
J3
W201
TS201 FORWARD SKIP
TS202 BACK SKIP
TS203 OPEN/CLOSE-1
TS204 OPEN/CLOSE-2
TS205 DISC-3
TS206 DISC-2
TS207 DISC-1
TS208 STOP
TS209 PLAY/PAUSE
TS210 OPEN/CLOSE-3
D201 DISC 3
D202 DISC 2
D203 DISC 1
TS201~TS210 SOP-133HS
D201~D203 GL3HY44

MAIN PCB P2069A501A

FRONT PCB
P2069A501B

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50WV

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

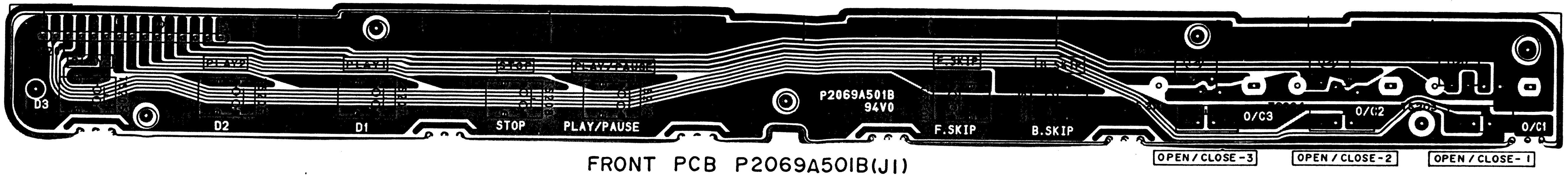
AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE MEASURED DURING PLAY MODE.

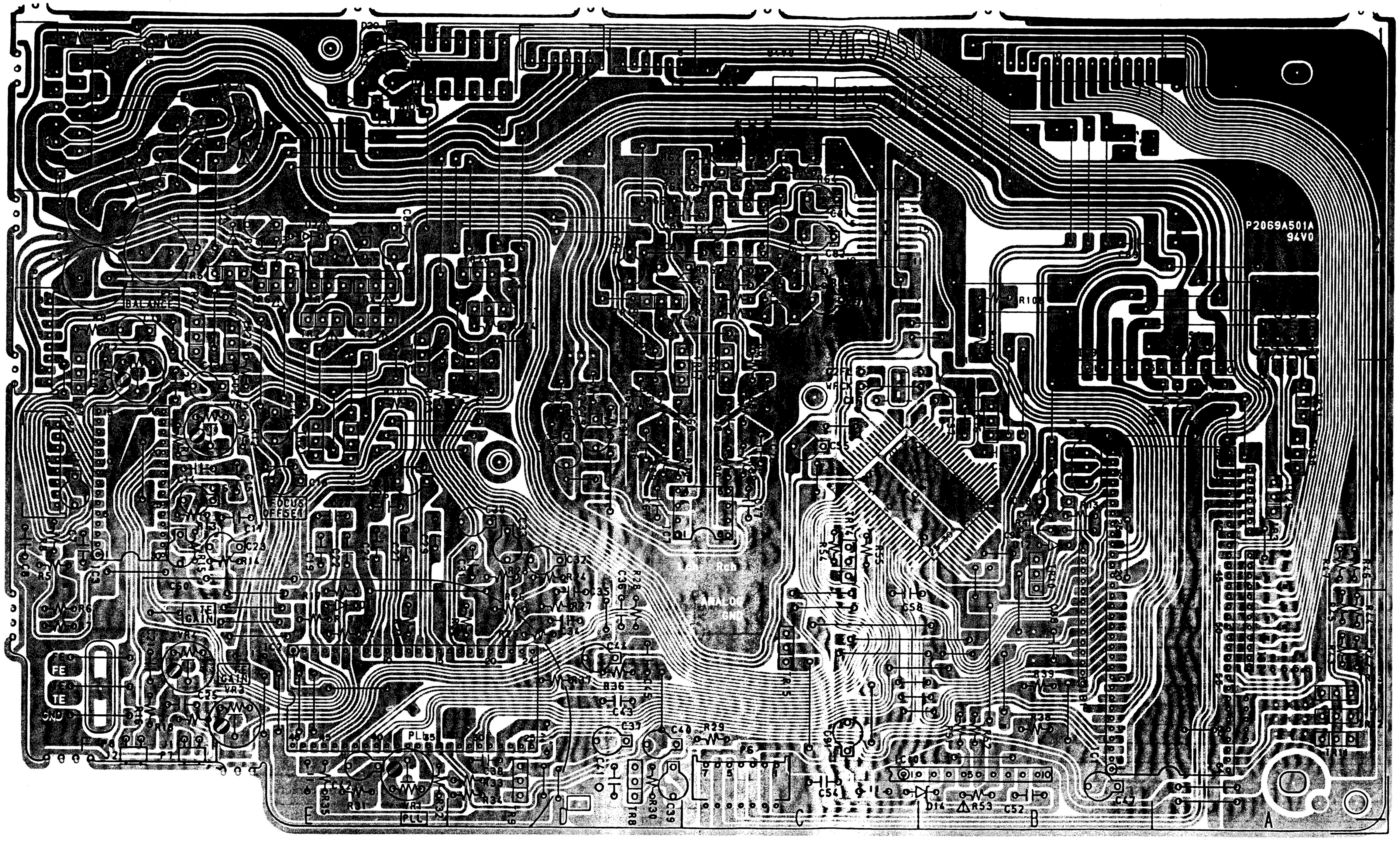
━━━━ B (POWER SUPPLY) LINE
──── SPINDLE MOTOR SERVO LINE
— — — —• SLED MOTOR SERVO LINE
──── SIGNAL LINE
—— – —— FOCUS SERVO LINE
— — — —• TRACKING SERVO LINE

CD-670
MAIN & FRONT
SCHEMATIC DIAGRAM

NO.12-12 P207101M
A01


D3
D2
D1
STOP
PLAY/PAUSE
F.SKIP
B.SKIP
P2069A501B
94V0
O/C3
O/C2
O/C1
OPEN/CLOSE-3
OPEN/CLOSE-2
OPEN/CLOSE-1

FRONT PCB P2069A501B(J1)


P2069A501A
94V0
FOCUS OFFSET
FE
TE
GND
ANALOG GND
PLL
R31
R32
R35
R36
R39
R53
C33
C35
C39
C52
C54
C56
C58
D14
TR8
A
B
C
D
E

MAIN PCB P2069A501A(J1)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

PRINCIPAL PARTS LOCATION

ICs

IC1	3,4A,B
IC2	4D,E
IC3	3F
IC4	3B,C
IC5	2C
IC6	2C
IC7	3C,D
IC8	1D,E
IC9	3A,B
IC10	4B,C

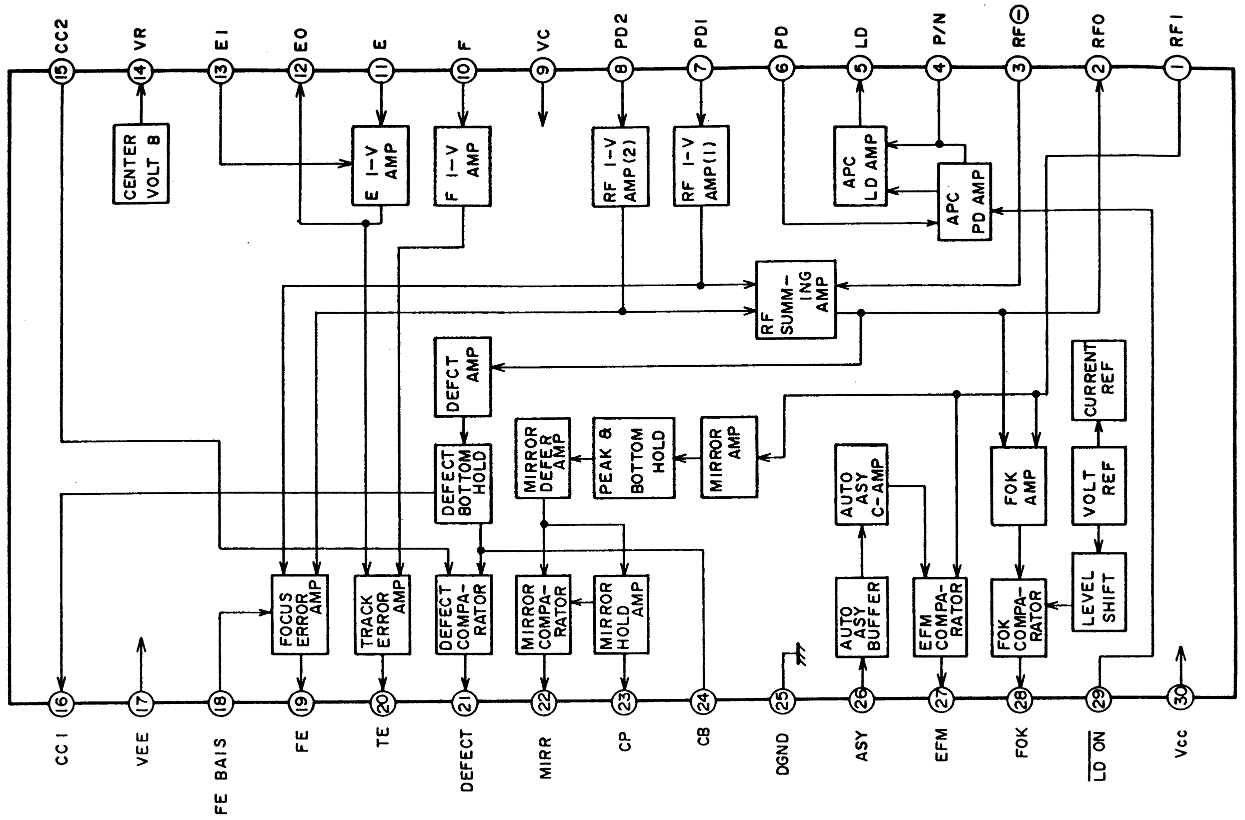
CONNECTORs

P1	2,3F
P2	3F
P4	1D
P5	1D
P6	4C
P7	4F
P8	4F

TRANSISTORs

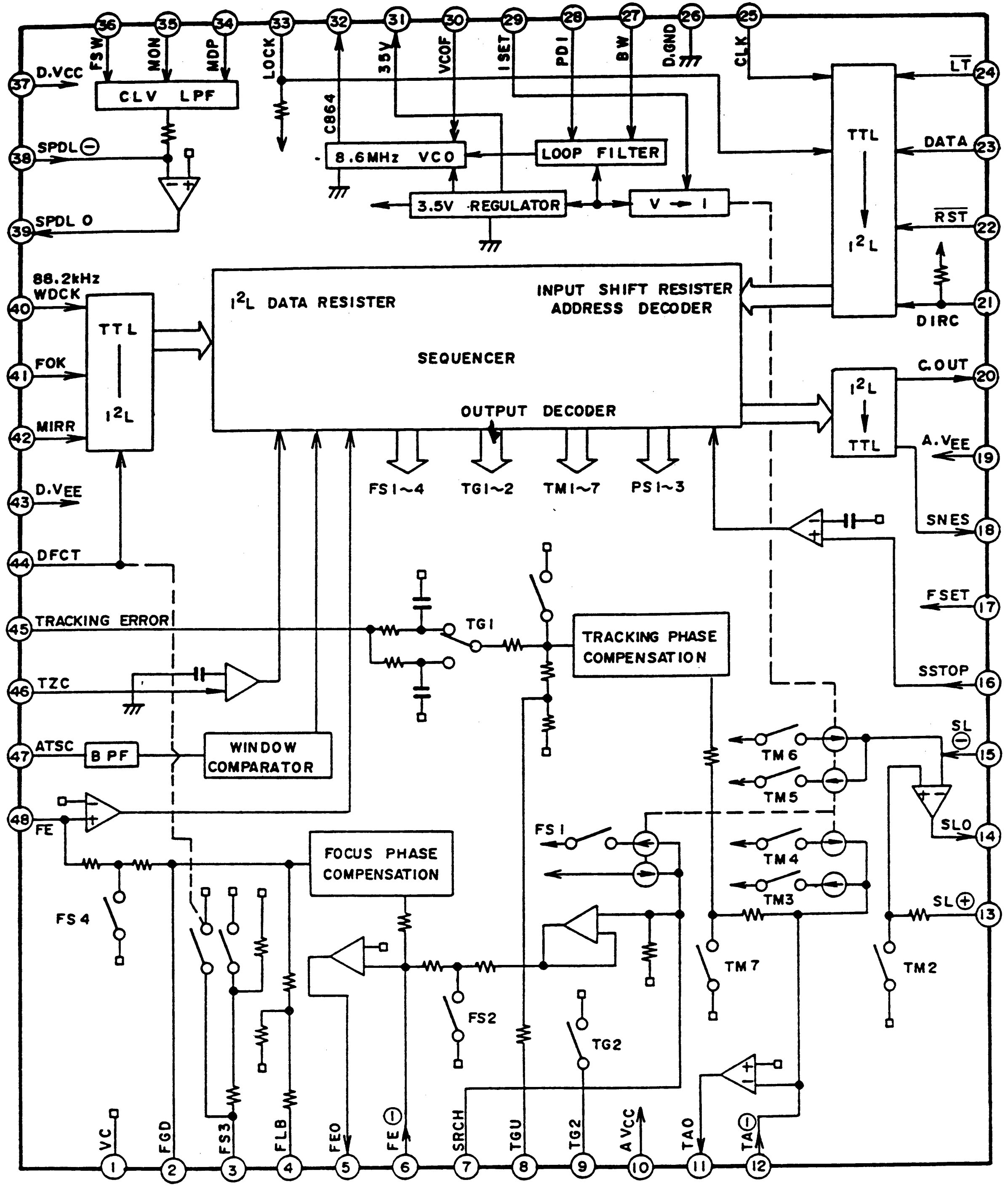
TR1	2E
TR2	2E
TR3	2E
TR4	2E
TR5	2E
TR6	2E
TR7	3F
TR8	4D
TR9	4D
TR10	3B
TR11	4A
TR12	4A
TR13	4A
TR14	3C
TR15	4C
TR16	3B
TR17	3D
TR18	3C
TR19	2D
TR21	3E
TR22	3E
TR23	2,3E
TR24	2F
TR25	2,3E
TR26	3D
TR27	2D
TR28	2D
TR29	3A
TR30	3A
TR31	3A

CXA1081 (RF AMPLIFIER)


CC2
VR
E1
E0
E
F
VC
PD2
PD1
PD
LD
P/N
RF⊖
RFO
RF1
CENTER VOLT B
E I-V AMP
F I-V AMP
RF I-V AMP (2)
RF I-V AMP (1)
APC LD AMP
APC PD AMP
RF SUMM-ING AMP
DEFCT AMP
DEFECT BOTTOM HOLD
MIRROR DEFER AMP
PEAK & BOTTOM HOLD
MIRROR AMP
CURRENT REF
AUTO ASY C-AMP
FOK AMP
VOLT REF
LEVEL SHIFT
FOCUS ERROR AMP
TRACK ERROR AMP
DEFECT COMPA-RATOR
MIRROR COMPA-RATOR
MIRROR HOLD AMP
AUTO ASY BUFFER
EFM COMPA-RATOR
FOK COMPA-RATOR
CC1
VEE
FE BAIS
FE
TE
DEFECT
MIRR
CP
CB
DGND
ASY
EFM
FOK
LD ON
Vcc
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

PIN NO.	SYMBOL	I/O	FUNCTION
1	RF1	I	RF SIGNAL FROM SUMMING AMP
2	RF0	O	RF SIGNAL OUT (EYE PATTERN CHECK POINT)
3	RF⊖	I	FEED BACK TO SUMMING AMP
4	P/N	—	NC
5	LD	O	AUTO POWER CONTROL OUT (TO LASER DIODE)
6	PD	I	AUTO POWER CONTROL IN (FROM PILOT DIODE)
7	PD1	I	A+C SIGNAL RF I-V AMP IN
8	PD2	I	B+D SIGNAL RF I-V AMP IN
9	VC	—	GND
10	F	I	TRACKING DIODE SIGNAL RF I-V AMP IN (F)
11	E	I	TRACKING DIODE SIGNAL RF I-V AMP IN (E)
12	E0	O	RF I-V AMP (E) OUT
13	E1	I	FEED BACK TO RF I-V AMP (E)
14	VR	—	NC
15	CC2	I	DEFECT BOTTOM HOLD IN
16	CC1	O	DEFECT BOTTOM HOLD OUT
17	VEE	—	−B
18	F · EBIAS	I	FOCUS OFF-SET VOLTAGE IN
19	FE	O	FOCUS ERROR OUT
20	TE	O	TRACKING ERROR OUT
21	DEFECT	O	DEFECT COMPARATOR OUT
22	MIRR	O	MIRROR COMPARATOR OUT
23	CP	I	CONNECT MIRROR HOLD CONDENSER
24	CB	I	CONNECT BOTTOM HOLD CONDENSER
25	DGND	—	GND
26	ASY	I	AUTO ASYMMETRY SIGNAL IN
27	EFM	O	EFM COMPARATOR OUT
28	FOK	O	FOCUS OK COMPARATOR OUT
29	LDON	I	LASER DIODE ON/OFF CONTROL IN
30	VCC	—	+B

CXA1082BS (SERVO SIGNAL PROCESSOR)


FSW
MON
MDP
LOCK
C864
35V
VCOF
ISET
PDI
BW
D.GND
CLK
D.VCC
CLV LPF
SPDL⊖
SPDL O
8.6MHz VCO
LOOP FILTER
3.5V REGULATOR
V → I
TTL
I²L
LT
DATA
RST
DIRC
88.2kHz WDCK
FOK
MIRR
D.VEE
DFCT
TRACKING ERROR
TZC
ATSC
FE
I²L DATA RESISTER
INPUT SHIFT RESISTER ADDRESS DECODER
SEQUENCER
OUTPUT DECODER
FS1~4
TG1~2
TM1~7
PS1~3
C.OUT
A.VEE
SNES
FSET
SSTOP
SL⊖
SLO
SL⊕
TG1
TRACKING PHASE COMPENSATION
B PF
WINDOW COMPARATOR
FOCUS PHASE COMPENSATION
FS1
FS2
FS4
TG2
TM2
TM3
TM4
TM5
TM6
TM7
VC
FGD
FS3
FLB
FEO
FE⊖
SRCH
TGU
TG2
AVCC
TAO
TA⊖
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

PIN NO.	SYMBOL	I/O	DESCRIPTION
1	VC	—	GND (0V)
2	FGD	—	Connect condenser for Focus servo gain control.
3	FS3	—	Focus servo gain select.
4	FLB	—	Connect condenser for Focus servo correction.
5	FE0	O	Focus drive output.
6	FE ⊖	I	FOCUS AMP. Inverting input.
7	SRCH	—	Connect condenser for Focus search wave.
8	TGU	—	Connect condenser for Tracking gain select.
9	TG2	—	Connect condenser for Tracking gain select.

PIN NO.	SYMBOL	I/O	DESCRIPTION
10	A.VCC	—	+5V
11	TA0	O	Tracking drive output.
12	TA ⊖	I	Tracking AMP. Inverting input.
13	SL ⊕	I	Slide motor non-inverting input
14	SLO	O	Slide motor drive output.
15	SL ⊖	I	Slide AMP. inverting input.
16	SSTOP	I	Not use (Holded "H" level).
17	FSET	I	Focus, Tracking compensation and CLV. LPF set up.
18	SENS	O	FZC. AS. TZC. SSTOP and $\overline{\text{BUSY}}$ output.
19	A. VEE	—	−5V.
20	C.OUT	O	Track count signal output.
21	DIRC	—	Not used
22	$\overline{\text{RST}}$	I	$\overline{\text{RESET}}$ Input.
23	DATA	I	Data signal input from CPU.
24	$\overline{\text{LT}}$	I	Lutch signal input from CPU.
25	CLK	I	Clock signal input from CPU.
26	D.GND	—	GND (0V).
27	BW	I	Connect condenser for Loop filter.
28	PDI	I	PDO signal from IC3 CXD1135Q (Pin 11).
29	ISET	I	Focus search, Track jump and slide kick current input.
30	VCOF	I	Connect register for VCO frequency.
31	3.5V	O	+3.5V REG. output.
32	C864	O	8.64 MHz VCO output.
33	LOCK	I	LOCK signal from IC3 CXD1135Q (Pin 7)
34	MDP	I	MDP signal from IC3 CXD1135Q (Pin 3)
35	MON	I	MON signal from IC3 CXD1135Q (Pin 2)
36	FSW	I	Connect condenser for CLV servo error signal LPF.
37	DVcc	—	+5V
38	SPDL ⊖	I	Spindle drive AMP. inverting input.
39	SPDLO	I	Spindle drive output.
40	WDCK	I	Auto sequence clock signal input (88.2 kHz)
41	FOK	I	Focus OK signal input.
42	MIRR	I	MIRR signal input.
43	DVEE	—	−5V
44	DFCT	I	Defect signal input "H" active.
45	TE	I	Tracking error signal input.
46	TZC	I	Tracking zero cross comparator input.
47	ATSC	I	ATSC detect window comparator input.
48	FE	I	Focus error signal input.

CXD1167Q (DIGITAL SIGNAL PROCESSOR)

Pin No.	Symbol	I/O	Description
1	FSW	O	Spindle motor filter switching control
2	MON	O	Spindle motor ON / OFF control
3	MPD	O	Spindle motor speed and phase control
4	MDS	O	Spindle motor speed control
5	EFM	I	EFM signal input
6	ASY	O	EFM signal slice level control
7	LOCK	O	Slide motor over reach guard signal output
8	VCOO	O	VCO output (f = 8.6436 MHz)
9	VCOI	I	VCO input
10	TEST	I	0 V (GND)
11	PDO	O	Phase comp.output
12	VSS	—	GND (0V)
13	CLK	I	Clock signal input from CPU
14	XLT	I	Latch signal input from CPU
15	DATA	I	Serial data input from CPU
16	XRST	I	System reset input L : RESET
17	CNIN	I	Tracking pulse input
18	SENS	O	Output of CPU interface
19	MUTG	I	Mute control signal input
20	CRCF	O	CRC check data output of the subcode Q
21	EXCK	I	Not use (GND)
22	SBSO	O	Not use
23	SUBQ	O	Subcode Q output
24	SCOR	O	Subcode sync detection output
25	SQCK	I/O	Clock signal for subcode Q
26	SQEX	I	Select input of SQCK (+ 5V)
27	DOTX	O	Digital output
28	GFS	O	H : Frame sync lock L : Frame sync unlock
29 ≀ 32	TEST ≀ TEST	I ≀ I	0V (GND) ≀ 0V (GND)
33	Vdd	—	+ 5V
34 ≀ 50	TEST ≀ TEST	I ≀ I	0V (GND) ≀ 0V (GND)
51	C4M	O	1 / 4 X'tal OSC output (f = 4.2336 MHz)
52	Vss	—	GND
53	XTAI	I	X'tal OSC input (f =16.9344 MHz)
54	XTAO	O	X'tal OSC output (f =16.9344 MHz)
55	MD1	I	Mode select input 1 0V (GND)
56	MD2	I	Mode select input 2 0V (GND)
57	MD3	I	Mode select input 3 + 5V
58	SLOB	I	Code select input for audio data 0V (GND)
59	PSSL	I	Mode select input for audio data 0V (GND)
60	APTR	O	Not use
61	APTL	O	Not use
62	C1F1	O	Not use
63	C1F2	O	Not use
64	C2F1	O	Not use
65	C2F2	O	Not use
66	C2FL	O	TP-C2FL
67	C2PO	O	Not use
68	RFCK	O	Not use
69	WFCK	O	TP-WFCK
70	PLCK	O	Not use
71	UGFS	O	Not use
72	GTOP	O	Not use
73	Vdd	—	+ 5V
74	RAOV	O	Not use

M38002M4 - 126SP MXA1CD2 (CD-670 SYSTEM CONTROL MI-COM)

Pin No.	PORT NAME	I/O	FUNCTION
1	VCC	–	+5 V power supply
2	OSC STOP 2	O	Oscillator control output for main CLOCK, VCO and PLL.
3	MUTE G	O	Output to stop audio data (H : mute on)
4	MOTOR 4	O	TRAY control output
5	MOTOR 3	O	TRAY control output
6	MOTOR 2	O	TRAY rotation control output
7	MOTOR 1	O	TRAY rotation control output
8	AUDIO MUTE	O	Not used
9	EMP	O	Emphasis control output
10	OSC STOP 1	O	Oscillator control output for main CLOCK, VCO and PLL.
11	$\overline{\text{LDON}}$	O	Laser diode ON/OFF control output (H : laser off)
12	DATA	O	Command data output
13	XRST	O	Reset signal output
14	XLT	O	Latch signal output
15	SENS (CNTR)	I	Auto sequence end detection input
16	CLK	O	Clock signal output
17	CRCF	I	Input to detect Sub Code - Q CRC check
18	SUBQ	I	Input to detect Sub Code - Q data
19	SQCK	O	Reading clock out of Sub Code Q data
20	GND	–	GND
21	BUS CLK IN	I	Bus clock input from TP-570/670
22	BUS OUT	O	Bus data output to TP-570/670
23	BUS DATA IN	I	Bus data input from TP-570/670
24	SCOR	I	Sub code - Q data detect input
25	SENS	I	Auto sequence end detection input
26	GND	–	GND
27	$\overline{\text{RESET}}$	I	Reset input
28	FOK	I	Focus lock detection input (H : Focus lock)
29	GFS	I	Input to detect PLL lock condition (H : lock on)
30	X IN	I	Main clock input
31	X OUT	O	Main clock output
32	VSS	–	GND
33 to 34	GND	–	GND
35	SLED IN SW	I	Input to detect pick up innermost position
36	TABLE SW 1	I	Input to detect turntable's disc position
37	TABLE SW 2	I	Input to detect turntable's disc position
38	CLAMP SW	I	Input to detect disc clamp position
39	CLOSE SW	I	Input to detect tray close position
40	OPEN SW	I	Input to detect tray open position
41	SPEED 3	O	TRAY rotation control output
42	SPEED 2	O	TRAY rotation control output
43	SPEED 1	O	TRAY rotation control output
44	OPEN/CLOSE 3	I	DISC3 OPEN/CLOSE operation switch input
45	PLAY/PAUSE	I	PLAY/PAUSE operation switch input
46	STOP	I	STOP operation switch input (to stop every movement and return PICK UP to start position)
47	DISC 1	I	DISC1 PLAY operation switch input
48	DISC 2	I	DISC2 PLAY operation switch input
49	DISC 3	I	DISC3 PLAY operation switch input
50	OPEN/CLOSE 2	I	DISC2 OPEN/CLOSE operation switch input
51	OPEN/CLOSE 1	I	DISC1 OPEN/CLOSE operation switch input
52	B. SKIP	I	BACK SKIP operation switch input
53	F. SKIP	I	FORWARD SKIP operation switch input
54	FB	I	Input for backward quick movement (Not used)
55	FF	I	Input for forward quick movement (Not used)
56	DISPLAY	I	Display control input (Not used)
57 to 61	GND	–	GND
62	LED 3	O	DISC 3 LED control output
63	LED 2	O	DISC 2 LED control output
64	LED 1	O	DISC 1 LED control output

Pin No.	Symbol	I/O	Description
75	C4LR	O	Not use
76	BCLK	O	Bit clock for input data
77	BCLK	O	Not use
78	DATA	O	Serial data output
79	WDCK	O	Word clock output
80	LRCK	O	L / R clock output

LC866008A-5199 MXA1GE1 (TP-670 FLD & GEQ CONTROL MI-COM)

Pin No.	PORT NAME	I/O	FUNCTION
1	BUS (DO)	O	Bus data output for tuner
2	BUS (DI)	I	Bus data input from tuner
3	BUS (CLK)	I	Bus clock input from tuner
4	DATA OUT	O	Electronic VR control data output
5	CLOCK	O	Electronic VR control clock output
6		–	Not used
7	MUTE	O	Mute control output (H : mute on)
8	FLD OFF	O	FLD / control output (H : FLD on)
9	TEST	–	Not used
10	RST	I	Reset input
11	XT 1	–	GND
12	XT 2	–	Not used
13	VSS	–	GND
14	CF 1	I	X'tal OSC
15	CF 2	O	X'tal OSC
16	VDD	–	+5 V
17	A/D 1	I	63 Hz /160 Hz / 400 Hz /1 kHz A/D convertor input
18	A/D 2	I	2.5 kHz / 6.3 kHz /16 kHz / total A/D convertor input
19	POWER	I	Power key input (H : ON, Not used)
20	MEMO	I	Memory key input (H : ON, Not used)
21	$\overline{\text{G·EQ}}$	I	G·EQ control mode on/off input (L : ON)
22	$\overline{\text{MODE}}$	I	Mode change input (L : ON)
23	$\overline{\text{SOUND CHRT UP}}$	I	Sound character ∧ key input
24	$\overline{\text{SOUND CHRT DOWN}}$	I	Sound character ∨ key input (Not used)
25 to 40	DIGIT 16 to DIGIT 1	O	Digit data output
41	VDD	–	+5 V power supply
42	VP	–	–26 V power supply forFLD blanking
43 to 56	SEGMENT 1 to SEGMENT 14	O	Segment data output
57	$\overline{\text{LEVEL}\ \wedge}$	I	Not used
58	$\overline{\text{LEVEL}\ \vee}$	I	
59	$\overline{\text{BAND} <}$	I	
60	$\overline{\text{BAND} >}$	I	
61		–	
62		–	
63	ANA. SW 1	O	Analogue switch IC control output (frequency band)
64	ANA. SW 2	O	Analogue switch IC control output (frequency band)

M38173M6-155FP MXA1TP4 (TP-570/670 SYSTEM CONTROL MI-COM)

Pin No.	PORT NAME	I/O	FUNCTION
1	FB 2	O	Analogue switch IC control output (S.DIRECT & REC OUT)
2	FA 2	O	Analogue switch IC control output (S.DIRECT & REC OUT)
3	VR UP	O	Main VR control (UP) output (H : UP)
4	VR DOWN	O	Main VR control (DOWN) output (H : DOWN)
5	FB 3	O	Analogue switch IC control output (SUPER BASS)
6	DECK CLK	O	DECK bus clock output
7	DECK DATA OUT	O	DECK bus data output
8	DECK DATA IN	I	DECK bus data input
9	FA 3	O	Analogue switch IC control output (SUPER BASS)
10	CD CLK	O	CD bus clock output
11	CD DATA OUT	O	CD bus data output
12	CD DATA IN	I	CD bus data input
13	G·EQ CLK	O	G·EQ bus clock output (TP-670 only)
14	G·EQ DATA OUT	O	G·EQ bus data output (TP-670 only)
15	G·EQ DATA IN	I	G·EQ bus data input (TP-670 only)
16	FC 1	O	Analogue switch IC control output (INPUT SELECT)
17	FB 1	O	Analogue switch IC control output (INPUT SELECT)
18	FA 1	O	Analogue switch IC control output (INPUT SELECT)
19	FLD OFF	O	FL display off output (L : OFF)
20	POWER LED	O	Power LED (orange) control output (Not used)
21	AMP MUTE	O	Pre amp mute control output (H : MUTE ON)
22	POWER MUTE	O	Power IC mute & VR LED control output (L : MUTE ON)
23	MUTE LED	O	Power mute LED (red) control output (Not used)
24	FM A/M	O	FM auto/mono control output
25	POWER DOWN	I	Power down detection input
26	REMOCON	I	REMOCON signal detection input
27	RESET	I	Reset input
28	XC IN	I	X'tal OSC
29	XC OUT	O	
30	X IN	I	
31	X OUT	O	
32	VSS	–	GND
33	TUNER MUTE	O	Tuner muting control output (H : MUTE ON)
34	PLL STRQ	O	PLL control output
35	PLL STIN	I	PLL control input
36	PLL CE	O	PLL control output
37	PLL CLK	O	PLL control output
38	PLL DATA	O	PLL control output
39	K 1	I	Key scan input 1
40	K 0	I	Key scan input 0
41	SB	O	Super BASS LED control output
42	SD	O	SOURCE DIRECT LED control output
43 to 52	DIG 9 to DIG 0	O	Digit data output for FLD
53 to 72	SEG 19 to SEG 0	O	Segment data output for FLD
73	VCC	–	+5 V
74	VEE (VP)	–	Negative power supply terminal for FLD blanking
75	AVSS	–	GND for A/D
76	VREF	–	+5 V for A/D
77	TUNED	I	TUNED display input from tuner (3.2V > : ON)
78	STEREO	I	STEREO display input from tuner (4.0V > : ON)
79	CD POWER OFF	O	CD power off output (H : OFF)
80	FC 2	O	Analogue switch IC control output (S. DIRECT & REC OUT)

PCM-67U (DUAL 18 BIT SERIAL INPUT D/A CONVERTOR)

Pin No.	PORT NAME	I/O	FUNCTION
1	+VCC	–	Analogue positive power supply terminal
2	VCOM (L)	–	L-ch V common terminal
3	N. C	–	No connection
4	I-OUT (L)	O	L-ch current output terminal
5	SERVO DC	–	Servo filter (capacitor connecting terminal)
6	REF DC	–	Reference filter (Capacitor connecting terminal)
7	I-OUT (R)	O	R-ch current output terminal
8	N. C	–	No connection
9	VCOM (R)	–	R-ch V common terminal
10	A. GND	–	Analogue ground
11	D. GND	–	Digital ground
12	TP2	–	Test terminal 2
13	DATA (R)	I	R-ch data input terminal
14	BCK	I	Bit clock input terminal
15	SYS-CLK	I	System clock input terminal
16	WDCK	I	Word clock input terminal
17	DATA (L)	I	L-ch data input terminal
18	RSVD	–	Reserved
19	TP1	–	Test terminal 1
20	+VDD	–	Digital positive power supply terminal

μPD75108CW (AX-570/670 SYSTEM CONTROL MI-COM)

Pin No.	PORT NAME	I/O	FUNCTION
1	PLAY·II	I	Tape II head position detect input
2	PACK·II	I	Tape II pack detect input
3	AR·REV·II	I	Tape II reverse recording inhibit input
4	120 μ/70 μ·II	I	Tape II 120 μs/70 μs detect switch input (L :120 μs)
5	AR·FWD·II	I	Tape II forward recording inhibit switch input
6	PLAY I	I	Tape I head position detect switch input
7	PACK I	I	Tape I pack detect switch input
8	120 μ/70 μ·I	I	Tape I 120 μs/70 μs detect switch input (L :120 μs)
9	REEL·II	I	Tape II reel pulse input
10	REEL·I	I	Tape I reel pulse input
11	x 1 PB 70 μs	O	Normal speed playback EQ switching output
12	x 2 PB 70 μs	O	x 2 speed playback EQ switching output
13	PB MUTE	O	Playback mute control output
14	CROSS	O	CROSS EDIT control output
15	DATA IN	I	Bus serial data input
16	DATA OUT	O	Bus serial data output
17	CLK IN	I	Bus clock input
18	BOP	I	Music interval detection signal input (L : Boundary of the music)
19	PB TAPE I	O	TAPE I playback switching control output
20	PB TAPE II	O	TAPE II playback switching control output
21	HEAD REC/PB	O	HEAD recording/playback control output (L : playback)
22	MECHA. POWER	O	Capstan motor power supply control output
23	MOTOR x 1/ x 2·I	O	Tape I capstan motor speed control output (L: x 1, H : x 2)
24	PL COMMON	O	Tape I & II plunger ON/OFF control output
25	PL·I	O	Tape I plunger ON/OFF control output
26	x 2 PB PEAK	O	For x 2 speed playback peaking frequency switching
27	MOTOR x 1/ x 2·II	O	Tape II capstan motor speed control output (L: x 1, H : x 2)
28	PL·II	O	Tape II plunger ON/OFF control output
29	FWD LAMP·II	O	TAPE II ▶LAMP control output
30	FWD LAMP·I	O	TAPE I ▶LAMP control output
31	VCC	–	+5 V power supply
32	VDD	–	+5 V power supply
33	x 1 DUBBING LAMP	O	x 1 DUBBING LAMP control output
34	REV LAMP·I	O	TAPE I ◀LAMP control output
35	REC PAUSE LAMP	O	REC PAUSE LAMP control output
36	x 2 DUBBING LAMP	O	x 2 DUBBING LAMP control output
37	REV LAMP·II	O	TAPE II ◀LAMP control output
38	TAPE II LAMP	O	TAPE II LAMP control output
39	TAPE I LAMP	O	TAPE I LAMP control output
40	MAIN VR LAMP	O	MAIN VR LAMP control output
41	TAPE II	I	TAPE II operation input (L : ON)
42	TAPE I	I	TAPE I operation input (L : ON)
43	x 1 DUB	I	x 1 SPEED DUBBING (L : ON)
44	x 2 DUB	I	x 2 SPEED DUBBING (L : ON)
45	RESET	I	Reset signal input
46	x 2	O	Main clock output
47	x 1	I	Main clock input
48	REW	I	Rewind operation switch input (L : ON)
49	REV	I	Reverse operation switch input (L : ON)
50	STOP	I	Stop operation switch input (L : ON)
51	FWD	I	Forward operation switch input (L : ON)
52	FF	I	Fast forward operation switch input (L : ON)
53	REC PAUSE	I	REC PAUSE operation switch input (L : ON)
54	AUTO MUTE	I	AUTO MUTE operation switch input (L : ON)
55	POWER SW	I	Power switch ON/OFF input
56	PACK MUTE	O	PACK MUTE control output
57	DOLBY REC/PB	O	DOLBY recording/playback control output
58	REC MUTE	O	REC MUTE control output (L : MUTE ON)
59	x 2 REC PEAKING	O	For X2 speed recording peaking frequency switching
60	REC CrO2	O	CrO2 tape recording EQ switching output (H : CrO2 tape)
61	FADE	O	FADE EDIT control output
62	OSC	O	Bias OSC ON/OFF control output (H : OSC ON)
63	x 1 REC PEAKING	O	For normal speed peaking frequency switching
64	VSS	–	Ground